BURMA GAZETTEER

SANDOWAY DISTRICT

VOLUME A

BURMA GAZETTEER

SANDOWAY DISTRICT

VOLUME A

BY

W. B. TYDD,

DEPUTY COMMISSIONER.

RANGOON

OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA

1912

SANDOWAY DISTRICT

VOLUME A

BY

W. B. TYDD,
DEPUTY COMMISSIONER.

RANGOON
OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA
1912

TABLE OF CONTENTS.

PAGE

CHAPTER I.

Physical Description.

CHAPTER II.

History and Archæology.

CHAPTER III.

The People.

CHAPTER IV.

Agriculture and Irrigation.

PAGE

CHAPTER X.

REVENUE ADMINISTRATION.

CHAPTER XI.

LOCAL SELF-GOVERNMENT.

CHAPTER XII.

EDUCATION.

CHAPTER XIII.

PUBLIC HEALTH.

PAGE

CHAPTER XIV.

MINOR ARTICLES.

SANDOWAY DISTRICT

VOLUME A.

CHAPTER I.

PHYSICAL DESCRIPTION.

Boundaries—Configuration—Islands—Hills—Rivers : Ma-i ; Kyeintali and Gwa ; Lamu and Tanlwè ; Taungup ; Sandoway—Climate—Rainfall—Geology : Alluvium ; Negrais rocks ; Ma-i beds ; Axials ; Intrusive rocks ; Hot spring—Fauna—Birds—Reptiles—Fish.

Sandoway (Burmese *Thandwe* or iron-bound) a coast district in the Arakan Division of Lower Burma lies between 17° 15′ and 19° 32′ North and between 94° and 94° 52′ East, and has an extreme length of 179 miles, an extreme breadth of 48 miles and an area of 3,784 square miles.

Bou ries.

It is bounded on the north by the Ma-i river which separates it from the An township of Kyaukpyu district ; on the east by the Arakan Yoma which forms a barrier between it and Thayetmyo, Prome and Henzada districts ; on the south by the Kyagaung hills and the Kyaukchun stream which divide it from the Thabaung township of the Bassein district ; on the west by the Bay of Bengal and an arm of the sea known as the Kaleindaung river, which lies between it and the island of Ramree and which receives the waters of the Ma-i.

Con gura

The greatest breadth is in the north where the coast line and the Yoma keep more or less parallel to each other for about one-fourth the length of the district. After this the Yoma curves in very slightly, but the coast line trending sharply to the east keeps on reducing the width of the district, until in the extreme south it is only 16 miles. The district is distinctly mountainous. The Arakan Yoma

sends out numerous spurs all of which have a north-westerly direction. These spurs in turn throw out numberless side spurs which sprawl down in irregular lines towards the sea. Not more than one-eighteenth of the entire area can really be called plain. Except in this plain and on the sides of the hills, where *taungya* and garden clearings are made, the district is covered with dense jungle of considerable variety which gives a green and fertile aspect to the landscape and adds much to its beauty. From the mouth of the Sandoway river northwards the coast is indented with intercommunicating tidal creeks; southwards it presents a rugged and rocky barrier to the ocean. The southern portion of the coast is rendered more forbidding by reefs and half submerged rocks which dot the sea along its entire length.

nds.

Twenty-three miles off Bluff point which is at the mouth of the Kyeintali river there is an uninhabited island known as Foul Island, and by Burmans as *Nan-tha-Kyun*. Both names are derived from a mud volcano which gives the island its conical appearance, and from which at times of eruption pours a strongly smelling torrent of hot mud bubbling with marsh gas. Beginning from early in 1908 eruptions also occurred along the line of reefs mentioned above and prevented steamers from calling at Sandoway for three years. Zalattôn Island at the mouth of the Sandoway river must be mentioned because near it is the roadstead for steamers calling at Sandoway. From the west end of the island a fixed Wigham patent red light is exhibited from 1st October to 31st May. Other noted land marks are the bell-shaped *Khaung-laung-du* rock on the southernmost mouth of the Taungup river, and Mount Surma or Kaleindaung a huge mass of sandstone lying off the mouths of the Tanlwè river.

lls.

Along the border of Sandoway, the Arakan Yoma forms an irregular curve with its concavity facing the Bay of Bengal. In the north some of the peaks attain an elevation of 5,000 feet; at 18° 39′ North where the Taungup Pass crosses the range the height sinks to 2,800 but it rises again to 4,000 feet at 18° 8′. South of this point the height diminishes rapidly; in the latitude of the mouth of the Gwa river it is 1,400 feet, and at the Thitkauk Pass where the Yoma leaves the district it is only 890 feet. Before any side spurs are thrown out some of the main spurs out-top the altitudes of the Yoma, but once side spurs have branched off the general elevation drops suddenly. In the northern half of the district the hills subside into plain, in the

southern half they end at the sea as a tumbled mass of rock. Nowhere within the district does the height exceed 4,400 feet, and those peaks which reach this height are difficult of access and are nearly waterless. The Kyagaung hills are a spur which leaves the Yoma at the Thitkauk Pass, and running northwest disappears in the sea opposite the town of Gwa.

Rivers. Even the larger rivers are but mountain torrents to within a few miles of the coast, it is only within tidal limits that they become navigable streams. The mouths of most have by the violent action of the sea been broadened into estuaries which are of unexpected width when compared with the size of the rivers. Those which are navigable by steam launches, taken in order from north to south, are the Ma-i, the Lamu, the Tanlwè, the Taungup, the Sandoway, the Kyeintali and the Gwa. They all rise on the western slopes of the Yoma and flow in a north-westerly direction, the first three fall into the Kaleindaung river, the others into the Bay of Bengal. The Tanlwè, the Taungup and the Sandoway rivers are connected by tidal creeks by means of which country boats and small launches can travel from Sandoway to Kindaunggyi on the Tanlwè, a distance of 100 miles, without having to put out to sea. These tidal creeks have been declared to be "inland waters" for the purposes of the Inland Steam-Vessels Act.

The largest sized country boats and launches can go ten miles up the Ma-i to the village of the same name. (Ma-i.) The villages of Kyeintali and Gwa are situated within sight of the mouths of their respective rivers, and can be reached (Kyeint[ali] and G[wa].) by vessels of the above class at all states of the tide, though care must be taken to navigate the vessels past the rocks and bar at the mouth. In the other four rivers there are shoals below the chief village on each. Larger sized paddy boats and launches can go up the Lamu and the Tanlwè (Lamu and Tanlwè.) only at spring tides, and then the furthest they can go is to six miles below the police-station on each of these rivers. At ordinary flood tides the same class of vessels can go up the Taungup as far as Wetcheit, which is two miles by road (Taungup.) and three by water below the township headquarters at Taungup. The Sandoway river at high water is navigable (Sandoway.) by vessels drawing up to 6 feet as far as the town of Sandoway, which is 16 miles from the sea; at ebb tide there is barely $2\frac{1}{2}$ feet of water over the Byewa shoal 3 miles below the town, and there is even less water over the Shwegyaungbyin shoal which is only half a mile below the landing stage.

imate. The climate of Sandoway though moist, warm and depressing is generally considered to be healthier and more pleasant than that of any other part of Arakan. As throughout Burma the year falls into three seasons which follow one another without much variation. The cold season from November to February, the hot season from February to May, and the wet season from May to October. In the year 1910 a maximum temperature of 103° and a minimum of 57° Fahrenheit were recorded. The mean maximum temperature in April is 92, in July 87, in December 83; the mean minimum in the same months is 74, 72 and 63.

ainfall. The rainfall is very heavy and July and August are the rainiest months. The normal rainfall at the headquarters of the three townships of the district is as follows:—

	Inches.
Taungup, northernmost	195
Sandoway	210
Gwa, southernmost	175

The highest recorded rainfall is 253·15 inches in 1868 and the lowest 106·60 in 1872. Disastrous floods are unknown because there are enough waterways of sufficient slope to carry off the rainfall, but floods are not uncommon near the coast in the Sandoway township. Here the creeks are narrow and flow between low banks, and water received during heavy rain is piled up by the incoming tide and spread over the surrounding country. In some cases the floods do damage to cultivated fields but generally the sediment deposited helps to enrich the soil. The common saying is that floods are highest every fourth or fifth year; a flood-water mark shows that in 1896 the ground floor of the Court-house in Sandoway was flooded to a depth of 2 feet.

Geology. The following information is extracted from the volume of Geological papers on Burma, reprinted from the records of the Geological Survey of India. On page 39 of this volume there is given in descending order a list of the ten groups of beds found in Lower Burma. Of these a cursory examination of the district, which was made in 1871 by Mr. Theobald of the Geological Survey, has located the following as occurring here:—

Name of group.	*Age.*
1. Newer alluvium } 2. Older alluvium }	... Recent.
3. Negrais ...	... Lower Eocene to Cretaceous.
4. Ma-i ...	... Cretaceous.
5. Axial ...	... Triassic.

Groups belonging to the Pliocene and Miocene ages are altogether wanting. The upper Eocene beds (Nummulitic) which occur along the entire length of the eastern foot of the Arakan Yoma are not found in this district. In the north they have been denuded, for Eocene rocks are met with only near the coast, in the south they have become included in the Negrais rocks. But a representative of the "Andagu Kyauk" which is the highest member of the Nummulitic group, and of which images of Gaudama are often made, is to be seen at Sanda 4 miles above Kyeintali on the left bank of the river; and a little further above at Pandaw are small out-crops of what is identified as Nummulitic limestone.

Alluv

The new alluvium is represented by blown sand, littoral concrete, and the fœtid mud of mangrove swamps. The term littoral concrete has been given to calcareous sand composed of comminuted shells and corals, which has been consolidated into more or less compact sandstone or ragstone. The blown sand and the littoral concrete occur more frequently south of the Kyeintali river, the fœtid mud of the swamps is oftener found north of that river.

The older alluvium is represented by a homogeneous clay, somewhat sandy, containing a band of a darker hue, which where conveniently exposed is dug up for the manufacture of coarse earthenware. This clay can be detected at the foot of the hills near the coast, in some places almost buried beneath recent *debris*, swept down by torrents from the adjacent hillsides. It forms the remnant of a nearly denuded belt of clays which was deposited in the sea when the land stood at a lower level than at present.

Negr rocks

The Negrais group belongs to the Bassein district for only a small portion of it occurs in Sandoway. Here it forms the core of the Yoma range as far north as the latitude of the Lamu river, and it also covers the portion of the district south of the southern watershed of the Kyeintali. A detailed description of this group would thus properly appear in the geology of the Bassein district, it will be sufficient to state here that the absence of recognisable fossils in the Negrais rocks prevents the exact age of this group being determined; all that can be said is that it is older than Nummulitic and younger than Triassic. About a mile south-east of Kyeintali and within the Negrais area there is a huge mass of compact sandstone like a quartzite. In it is a low cave due to marine action when the mouth stood not far from low water mark, at present an entrance can be

gained only by means of a ladder. The cave is tenanted by great numbers of a Rhinolophine bat.

a-i ds.

The Ma-i group covers the rest of the district. It has derived its name from the discovery in the bed of a small stream near Ma-i of the fossil which proves the group to be of Cretaceous age. There is a lesser amount of alteration and disturbance in the rocks of this group than in those of the Negrais. The two most characteristic rocks belonging to it are an argillaceous limestone and a greyish rather earthy sand stone. The first is very homogeneous in grain and of a light cream colour, but in places exhibiting a somewhat speckled or flea-bitten aspect from the dissemination through it of sublenticular crystalline particles; outcrops occur all the way from Ma-i to Kyeintali, but they are either in too small quantities or in too inaccessible localities to be of much economic value. The sandstone sometimes has a dissemination through it of small globular concretions of lime and iron (with a trace of magnesia) rarely exceeding the size of a small pea; this imparts to the rock so much of the aspect of amygdaloid trap, that it requires careful examination to realise that it is a sedimentary and not a volcanic rock. It is to be seen in several localities between Ma-i and Kyeintali.

ials.

Beyond the horizon of the Negrais group, the axis of the main Yoma range is composed of rocks to which the term "Axial" has been given. These old beds form a wedge which has been elevated along a line of fault and so has been forced up through the newer strata. They fall more within the geology of the Prome district where they are better seen, a full description of them is given on pages 210 to 219 of the volume mentioned above.

rusive ks.

Serpentine, though it has not been found must be largely developed in some part of the Ma-i valley, to judge by the number of pebbles of this rock seen in the bed of the river near the village of Lindi. Steatite occurs in a few places, notably at a spot 3 miles north-west of Sandoway; though it is of the pale grey variety used by Burmans for writing purposes, it is not found in such massive form as to yield the large sticks quarried in Upper Burma, and the mineral is not worked at all.

ot ing.

A hot spring first described in 1870 is still to be seen. It is in the bed of the Sandoway river four marches above the town, and issues from a vertical fissure in a slaty rock of metamorphic formation; water flows from it at the rate of about 1½ gallons a minute and has a temperature of 110° Fahrenheit. The predominant impregnation is sulphuretted

hydrogen and carbonic acid gas.

Fauna

The fauna is varied but not very plentiful. It includes elephants, tigers, rhinoceros, bison, leopards, wild cats, black bear, pig, deer and monkeys. Elephant, rhinoceros and bison are met with in the Yoma but only rarely, sometimes small herds of elephant wander down as far as the line where inhabited country begins. Tigers used to be so plentiful along the Taungup-Prome road that travellers had to barricade their camps, but now they are heard of only occasionally, generally from villages on the head waters of most streams from Taungup southwards; the absence of game often turns them into man-eaters. Leopards and wild cats are fairly common all over the district and take their toll of cattle and dogs. A fair amount of damage is caused to crops by black bear, sambur, gyi, and pig; in more remote villages guns have regularly to be lent to villagers to protect their crops from the ravages of these animals. The jackal is pressing in on the north, it is becoming quite common in the neighbourhood of Taungup and lately has appeared near Sandoway. In 1850 a reward of five rupees used to be given for killing a tiger, and two and a half rupees for a leopard; the rewards given now are forty rupees and twenty rupees, respectively. During the past three years an average of seven hundred rupees a year has been paid as rewards for the destruction of wild animals.

Birds

Game birds are scarce. The crow of the jungle fowl or the call of the partridge is rarely heard, likely snipe grounds are too deep under water at flighting time for birds to settle in large numbers. The most common birds in the district are the crow, king-crow, night-jar, green-pigeon and imperial pigeon. The Burmese peafowl (*pavo muticus*) is fairly common in the upper reaches of the Taungup and Tanlwè rivers, and the large talking mynah is found in the hills and is often seen kept as a pet. The records show that until 1862 edible birds' nests used to be collected from the rocky islets along the coast but there is no trace of these birds now.

Reptil

Crocodiles (*C. porosus*) though not numerous are to be seen in the mouths of most rivers; rewards have sometimes to be offered for their destruction when they become aggressive and dangerous in the breeding season in July and August. From the mouth of the Sandoway river southwards a few turtles (chiefly *Caouna olivacea*) come and lay their eggs on the sand, but as the sands are being washed away their visits are becoming more rare. There are very

few snakes of the poisonous kinds, the cobra, banded krait, and hamadryad have occasionally been met with, but there are no Russell's vipers. The python though rare is found sometimes. As in other coast districts three kinds of *gyats* or sea serpents are known.

ish, Just as the dense jungles are comparatively devoid of game so the numerous inland waters are singularly devoid of fish. It is only off the coast or in the broad estuaries that the fisherman reaps any kind of reward for his labour. At the end of the rains shoals of shrimps arrive off the coast and are captured and made into *ngapi*. In pursuit of the shrimps come the *Ngakinba*, a long flat small-scaled fish, and the *Ngaman* (small sharks and saw-fish). The former are never and the latter are rarely eaten fresh, they are salted and dried. In the early cold weather the *Nga-tha-lauk* or hilsa and the much prized *Yuzana* (white and black pomfrets) appear off the mouths of the rivers at each high water and are quickly snapped up, but they are not nearly so plentiful as in the neighbouring districts of Kyaukpyu and Akyab. A little later come the *Ngataya*, a broad mouthed longish fish, and then just before the rains shoals of *Nga-nyi-nan* or *Nga-nan-tha* appear, the latter is a sandalwood scented fish about nine inches in length and is much sought after. It disappears with the first showers of the rains but its place is taken by the *Ngabyan*, the pointed-tailed goby. After that, during the bursts of the monsoons, the waters are almost fishless until the shrimps come in again.

CHAPTER II.

HISTORY AND ARCHÆOLOGY.

Legendary—Kingdom of Arakan—The Burman Conquest—First Burmese war—Political disturbances—Second Burmese war—Later disturbances—Territorial changes—Archæology.

egend- y. According to the palm-leaf chronicles, there reigned in Barauathi (Benares) at a time when the duration of human life was 90 millions of years, a descendant of the first of the four Buddhas of the present epoch. One of his sons Thamuti-Dewa received as his portion the country now forming Sandoway district. For him the *Nats* or spirits built a city Is-su-ra Myo (ဿဝိရှယမြို့) near the Civil Station of modern Sandoway. Many ages later another branch of the Benares

house overthrew the ruling dynasty and started a line of its own in the same capital. During the reign of Nareindo or Min-zo the last of these monarchs, the country was invaded by Vasudeva and his nine brothers who were grandsons of a king that ruled in Mogoung. Arriving at the mouth of the Sandoway river, the invaders were foiled in their attempts to find the city owing to the devices of its guardian *Nat*, or as some say to its own miraculous power of soaring above the earth in times of danger. At length, through the wiles of the master magician of the invaders, Min-zo was persuaded to cut off three finger lengths of his tushes; the city thereupon lost its miraculous power and its guardian *Nat*, being also deprived of its attribute of invisibility, appeared in the form of a huge bird and was overpowered and killed. A ravine near the Civil Station known as the *Thwe-gyaung* is pointed out as having been formed by the rush of blood from the severed neck of the dying bird. The brothers then bound the city to the earth with an iron chain or as some say by driving in an iron pole, and called the city in old Burmese *San-dwe*, later changed to the harsher *Than-dwe* (the iron bound), and made it their capital.

After some time the people rose against the invaders, the younger brothers were killed, and Vasudeva and his consort were driven out. They fled to the forests in the north and an incident in their wanderings has supplied two place-names. Near a hill north-west of Taungup their attention was attracted by the singing of birds known to them in their distant native country, they looked up and listening intently longed for their own homeland; the hill was named *Motaung* (Burmese *Mawtaung*) or the looking upward hill, and the locality *Tan-nhwè* or place where hearts were turned. These two names have now been corrupted into Myotaung and Tanlwè.

Tradition makes out Sandoway of those days to have been a city of quite metropolitan size which extended on both banks of the river; for it mentions localities on opposite banks and 9 miles apart as being within the limits of the royal capital. In the categorical manner so common among Burmans old Sandoway is described as the city of the three holy places, the three ports and the three capes. The holy places are the three pagodas which will be described under the head archæology in this chapter, the ports were Pyaw-zeik, Talin-zeik and Kyauk-zeik, and the capes are Thazi-maw, Khayan-maw and Kin-maw.

The legend of the rule in Sandoway of the princely house

of Benares rests probably on no basis of fact, but that there has been at least one Shan invasion of Arakan is certain, also that Sandoway was one of the older capitals of Arakan.

Kingdom of Arakan.

Sandoway continued at intervals to be the capital until toward the end of the tenth century, when the incursions through the Taungup Pass led to its being abandoned and the capital being set up at more inaccessible places and eventually at Mrohoung. In later years Sandoway appears under the classical name of Dwarawadi as one of the four provinces of the Arakan Kingdom ; the other three were Daing-nya-waddy (Arākan proper) Ramawaddy (Ramree), and Mekha waddy (Cheduba). It is recorded in the history of Arakan that at the end of the fourteenth century the viceroy of Sandoway who bore the title of Sit-thabyin or commander of the body guard, rebelled and usurped the throne for two years. The only mention made of Sandoway in the history of neighbouring states on the east is that at times it formed a city of refuge for rebellious but unsuccessful royalties or governors, and that at other times it marks the limit of the advance in projected invasions of Arakan.

The Burman conquest.

In 1783 the Burmese King Bodawpaya made war on Arakan. The chief invading Burmese army led by the Ein-she-Min or Crown Prince came over the Taungup Pass, and marching *viâ* Taungup crossed over to Ramree, defeated the Arakanese near Kyaukpyu and then turned northward and marched on Mrohoung. After the conquest of Arakan, the Crown Prince determined to carry off the famous Mahamuni Image of Gaudama, as a trophy to be enshrined in his father's capital. The route selected for the passage of the image was about 2 miles south of the Taungup Pass. Subsequent geological surveys report that the Yoma has its greatest width along this line, and that consequently there are gentle inclines instead of the steep slopes met with elsewhere, and that water is most plentiful here. The writer of that report came to the conclusion, that the selecting of this route for the passage of the image was not a fortuitous circumstance, but was the result of careful examination. The Ein-she-Min set his army of 12,000 men to work to prepare a way and a track wide enough and easy enough to take a cart was cut. The image was sawn in two across the breast and was brought from its original site in rafts as far as Taungup, where a *Zedi* or small pagoda marks the spot of disembarkation. It was then placed on two trucks, which were dragged by the Ein-she-Min's Army over the Yoma to Padaung on the Irrawaddy, in seventeen days.

For this achievement the King bestowed the title of Padaung Mintha on his son. After the Burmese conquest Sandoway was shorn of the tract north of the Ma-i river, and became one of the four *Wun*ships into which the new territory was divided by the Burmans. But it retained the classical name of Dwarawadi down to the time of the annexation.

On the breaking out of the first Burmese war in 1824 the *Wun* of Sandoway was one of the commanders of the army that invaded Chittagong. When that army was driven back and we in turn invaded Arakan, the Sandoway river was staked and stockades armed with wooden mortars were erected along its banks, but on receiving news of the fall of Mrohoung the *Wun* fled across the Yoma; and Sandoway was occupied without resistance by a force under General Macbean, on the 30th April 1825. Lieutenant Wyndham who commanded the naval forces was put in charge of civil duties in subordination to the civil officer who was stationed at Ramree. When later in the same year the greater portion of the Arakan field force was withdrawn, owing to the unhealthiness of the climate, Sandoway was made the military headquarters, and here was stationed a detachment of regular Native Infantry, a corps of irregulars known as the Arakan Provincial battalion, and the newly raised Mugh Levy. During the continuance of the war in Burma, Sandoway remained peaceful, it even supplied coolies and pack bullocks for the army operating from Prome. In March 1827 Sandoway became the headquarters of a new district. At the end of 1828 owing to commissariat and transport difficulties, the military headquarters and most of the troops were moved to Kyaukpyu, leaving only small detachments of the Arakan Provincial battalion and of the Mugh Levy in garrison. First Burmes[e] War.

Owing mainly to the very heavy taxation introduced after the annexation, as will be explained in Chapter X, Maung Tha U, the *thugyi* of the hill circle of Alegyaw, took up arms against Government in February 1829. He collected a large following of discontented villagers and of transborder men and marched on Sandoway. Captain Gordon, who had been in charge of the district since its formation, moved out with a small party of troops to attack him but was killed in the assault on the rebel position; the insurgents however were driven back and retired into the north and north-east portions of the district. They captured and burned the police post at Ma-i and killed all the policemen, they then harried the Ma-i circle to such an extent that the inhabitants migrated Political disturbances.

en masse to Ramree. In order to quell this rebellion three fortified posts held by the Mugh Levy were established in the hills, and four others held by the Arakan Provincial battalion were established in the plains; in addition columns composed of this battalion and of regulars, were constantly operating against the rebels. But owing to the difficult nature of the country, and to the easy way of retreat that lay open into Ava territories, it was well towards the end of 1830 before the rebellion was finally stamped out. Maung Tha U himself was never captured, he fled to Padaung and died there. In 1831 a *pôngyi* of Kyeintali gave out that he was a *Minlaung* or embryo king and gave much trouble before his following was dispersed. These were the only two attempts made within the district to overthrow the new government, but right up to the time of the settling down of the districts of Prome and Bassein after the annexation of Lower Burma, Sandoway was periodically raided by bands from across the border; and up to 1850 a number of defensible posts manned by regulars or by the Mugh Levy, had to be kept up. The incursions were mostly from the direction of Upper Burma, comparatively few raids were made into the country south of Sandoway, and there the local police gave sufficient protection. As late as 1853 a band of trans-border Chins 250 strong, pounced down on the villages along the upper Taungup river and carried off a large number of captives.

Second Burmese War.

During the second Burmese war the district was singularly quiet, even the old raids ceased. Many of its traders returning from Burma, gave useful information regarding the intentions of the Ava Government and of the massing of its armies. But until our troops landed at Rangoon the whole of the Mugh Levy, or as it was now called the Arakan Local battalion, had to be kept concentrated at Sandoway, This was done because the Tabyin Mingyi, son of Maha-bandoola, who commanded the Burmese army, threatened to invade Arakan *viâ* the Taungup Pass. There was some talk at first of sending a column over this pass to co-operate with our army advancing from Rangoon, but the project was given up on account of difficulties of transport. Throughout the war many important despatches from the Central Government at Calcutta were carried even as far as Rangoon by runners provided from this district.

Later disturbances.

After the annexation of Upper Burma and beginning from about the end of 1887, the district in common with other Lower Burma districts, was overrun by pretenders and by

dacoit gangs. The chief of these was the one led by the Zaw-gyi *Bo*, a native of Bassein and the Kyauksin *Bo* of this district, which harried the country south of Kyeintali. These disturbances culminated in the rebellion of 1890. In that year, Sandoway town was attacked by a band of fanatics headed by some *pôngyis* led by the chief *pôngyi* of the town of Sandoway, who professed by means of tattooing to render his followers proof against all injuries. The band was composed of men from the villages at the headwaters of the Sandoway river, from which tract Maung Tha U had also obtained his first adherents. The insurgents succeeded in setting fire to a portion of the town and to the Court-house, but dispersed when the military police at the Treasury fired into them and shot down one of the leading *pôngyis*. The gang did no further damage and every member of it was accounted for by death or capture before three months had passed. Since then the district has enjoyed uninterrupted quiet.

Territorial changes.

As the Dwarawadi province of the Arakan Kingdom Sandoway included most of the main land of the present district of Kyaukpyu, for it extended in the north as far as the Dalet river. In the south, the Kyeintali river in about latitude 18° was the recognised limit of Arakan. The country further south stretching as far as the sea and known as the *Taungkwin*, belonged to Sandoway or not according to the enterprise shown by the Arakanese kings. After the Burmese conquest the country north of the Ma-i river was made into the *Wun*ship of An, but in the south the Sandoway *Wun*ship extended as far as Cape Negrais and thus included the *Taungkwin* mentioned above. Shortly before the first Burmese war a son of the King of Burma who was Governor of Bassein, overawed the *Wun* of Sandoway and annexed the country between Cape Negrais and the Kyeintali river, so that at the time of the first Burmese war this tract did not form a portion of Arakan. However, when negotiations for peace were first entered upon between the British and the Burmese, the wrongful appropriation by the Governor of Bassein was pointed out, and by the Treaty of Yandaboo this tract was restored to Arakan. In 1827 the district of Sandoway was formed and included the *Wun*ship of An; but this district was found to be too unweildy and in 1833 An was again separated from it. In 1853 the tract which had been annexed by the Governor of Bassein was made over to the newly formed district of Bassein; but eleven years later the northernmost portion of it lying between the Kyeintali and Gwa rivers was given back, and in 1893 an

adjoining portion between the Gwa river and the Kyauk-chun stream was restored. Since then there have been no changes. In 1853 after the southern portion of the district had been handed over to Bassein, and after the construction of the Taungup-Prome cart road had been put in hand, there was a proposal to remove the headquarters of the district to Padin island at the southern mouths of the Tanlwè river. The new site was more central for the district as it then stood, but its chief recommendation was that it could be made a port-of-call for ocean-going steamers. The proposal fell through owing to the expense and difficulty of extending and keeping open a road to Padin island. The district still suffers from the old disadvantage of having a headquarters that is not easily accessible to the outside world.

Archæology. Sandoway does not boast of many antiquities, but it possesses three features of archæological interest in the pagodas known as the Andaw, Nandaw and Sandaw on three hills near Sandoway town. These pagodas were erected by Arakanese Kings of the Vesali dynasty in the years 761 A.D., 763 A.D., and 784 A.D. when Sandoway was the capital of the Kingdom of Arakan. The Sandaw is at the south end of the town, the Andaw is on the opposite bank, and the Nandaw is at the north end of the town. As their names signify they enshrine respectively a hair, a tooth and a rib of Gautama. Three times a year pilgrims resort to these pagodas, remaining one day at each shrine on each occasion, but latterly these observances have not been regularly practised. The *Le-myetna* (four-sided) pagoda in the Civil Station of Sandoway, and the above mentioned pagodas, have been declared protected monuments under the Ancient Monuments Preservation Act.

Silver coins are found from time to time. The older ones are about the size of a four-anna piece and were struck by the kings of the Vesali dynasty. On the obverse is a caparisoned bull above which is the title of the king, on the reverse is the sun, the crescent moon, and a trident. Later coins are about the size of a rupee, they bear no heraldic symbols but only the name and the date of the king, in old Burmese characters on the obverse and in Persian or Nagri on the reverse. The latest found coins bear a date corresponding to 1780 A.D. and have a pathetic interest, because they were struck by kings of the dynasty which was brought to a close by the conquest and annexation of Arakan by the Burmese. In 1872 a stone slab was found in the jungle near the village of Byewa on the Sandoway river; on it

is inscribed in Sanskrit characters of the 8th century the first couplet of the Buddhist text from *Ye dharma* down to *Maha Sramana*. In the same year a smaller slab inscribed with similar characters, was dug out of a hill close to the village of Ngalônmaw, which is near the police-station of Kindaunggyi north of Taungup. In 1881 some bronze implements were dug up near the village of Lintha which is about 7 miles south-west of Sandoway, but it is not known what has become of them. This is a pity, as they may have been relics of an extinct race known as the "Lins".

Celts of the Neolithic age are sometimes found in the beds of streams and on hill sides cleared for *taungya* cultivation. These celts are in the form of adzes and axes chipped out of chert, basalt and hornstone rocks which do not occur in this district.

CHAPTER III.

THE PEOPLE.

Population—Rate of increase—Density—Races: Arakanese; Burmans; Chins; Burman Mahomedans; Natives of India; Lins—Languages—Religions.

The population of the district has increased from about 20,000 in 1828 to 102,803 in 1911. Except for two periods of depression, which occurred immediately after each of the first two wars with Burma, the increase has been regularly maintained year by year. After the first war the heavy taxation that was imposed under the circumstances which will be explained in the chapter dealing with Revenue, drove large numbers of people to migrate to the territories of the King of Ava, and the ravages of dacoit gangs drove others to take refuge in Ramree. But when taxation had been reduced and dacoity had been suppressed most of these people returned, for in 1835 the population was reported to be the same as in the year 1828. After the second war there was again a large decrease in the population owing to two causes. In the first place many subjects of the King of Ava, who had fled to this district in order to escape the troublous times of kings Tharrawaddy and Pagan Min, returned to their old homes after the annexation of Pegu in 1852. The other cause for decrease was that in 1853 a large slice of country was handed over to the newly formed district of Bassein. Consequently the population decreased from about 43,000 in 1853 to 30,000 in

Population.

1858. Eleven years later a portion of the tract which had been given to Bassein was restored and the population of the district was found to be 46,000 in 1865. Since then the number has steadily increased, as the following enumerations show: 1872, 55,325; 1881, 65,182; 1891, 78,509; 1901, 90,927; 1911, 102,803.

Rate of increase.

Between 1832 and 1852 when immigration from Burma was most active the population increased by 30 per cent. in the first ten years and by 50 per cent. in the second ten years. From 1853 to 1864 there was the decrease of population explained above; after the latter year immigrations set in again, but the numbers who came to the district only slightly exceeded those who left it, and a more normal rate of increase began to be set up. During the past twenty years there has been no immigration, on the other hand a few Burmans leave the district yearly to return to Bassein and Henzada, and even a few Arakanese are following their example. Partly on this account, the rate of increase has dropped from 15·9 per cent. in the decade ending 1901, to 13 per cent. in the decade ending 1911. For Lower Burma the rate of growth is slow though it is higher than in the adjacent districts of Kyaukpyu and Akyab. At the enumerations of 1891 and 1901 there were in rural areas 978 females to every 1,000 males.

In 1911 there were in the district 51,328 females and 51,475 males, or 997 females to every 1,000 males.

Density.

The mass of the population lives in a strip of country 5 to 10 miles wide. In the north this populated strip is about 8 miles from the coast, in the centre it is broadest and extends to the coast, in the south it is narrowest and hugs the coast. Inland of this strip the only villages to be seen are a string along each of the larger streams, and the isolated and frequently shifted hamlets of *taungya* fellers. Nowhere are there any villages more than 20 miles in a straight line from the sea.

The density, which in 1911 was 27 persons to the square mile is below that of Kyaukpyu, it was 15 in 1871, 21 in 1891, and rose to 24 in 1901; so that in each decade of the last forty years there has been an increase of three persons to the square mile. The density by townships in 1911, was 23 in Taungup, 33 in Sandoway, and 27 in Gwa. In view of the large proportion of hill country, this density is never likely to be very much enhanced. Sandoway is a district of small villages; in 1871 the average number of houses in a village was 26·7, in 1901 it was 27·7, and in 1911 it was 25·3. Of a total of 791 villages in

1911, only six have a population of more than 1,000, and the headquarters of the district has only a little more than 3,000 inhabitants. The average number of persons occupying a house was 5·5 in 1891, 5·4 in 1901 and 5·1 in 1911; in 1828 the number was estimated to be 3·25.

Races. The races permanently resident are in order of numbers Burmans, Arakanese, Chins, a people who may be called Burman Mahomedans and Natives of India.

Arakanese. The bulk of the Arakanese population is to be found in the northernmost township of the district. Going southward in the next township, they have more and more been displaced by other races, until they are almost lost sight of after passing a line drawn 10 miles south of Sandoway town. The Arakan country proper extended beyond this line and reached its limits about 30 miles further south at the Kyeintali river, but few Arakanese ever settled in this portion of their country. Here the old Arakanese villages can be counted on the fingers of one hand, and beyond this river there was only one small colony of them, which was at Yahaing near the mouth of the Gwa river. After the annexation however immigrants chiefly from Cheduba and Ramree in Kyaukpyu district established a few villages a little to the north of the Kyeintali river and even formed about a dozen in the tract between this river and Satthwa. Except in the extreme north the Arakanese are not of such a pronounced type as those found in Akyab and Kyaukpyu districts; but wherever found the Arakanese tend to congregate in villages by themselves, few being found where Burmans have taken up their abode. The numbers noted under each of these races at the last three enumerations, show that, owing to the slight differences in general between the Burman and the Arakanese as found in this district, more and more Arakanese are being classed as Burmans. The figures given for each class are:—

—	1872	1891	1901	1911
Burmans ...	19,000	28,000	49,700	59,792
Arakanese ...	28,400	27,500	29,400	30,128

It can however be said that unlike the districts of Akyab and Kyaukpyu, Sandoway possesses more Burmans than Arakanese. Officers who have been called upon to differentiate between the two peoples as found here, describe the

Arakanese as being of poorer physique and less frank mannered than the Burman. The Arakanese also dispose of their dead by burning oftener than the Burman does.

Burmans. The country south of the Kyeintali river was peopled by Burmans even when Arakan was an independent kingdom, but now they form the greater proportion of the population as far north as Taungup. Their presence is due to immigrations after the conquest of Arakan by the King of Ava in 1784, and again after the annexation of 1826. Just as the Arakanese in Sandoway have been modified by the stronger charactered Burman, so also have the latter suffered alteration to some extent by contact with the former, for the Burman found here is not quite the same man as known in Burma proper.

Chins. Chins are found along the upper waters of all the rivers as far south as the Kyeintali. They are more thickly grouped together in the northernmost township of the district, southward they are found in more scattered hamlets. Their numbers are given as 6,600 in 1852, 4,800 in 1872, 6,000 in 1891, 6,800 in 1901, and 8,077 in 1911. Previous to 1826 there were comparatively few Chins and they lived in the immediate vicinity of the Yoma. But after the annexation of Arakan large numbers came in from the hill tracts of Mindôn, and owing to the harassment of transborder raiders many Chins formed settlements nearer the plains. Some have become plainsmen and live in hamlets alongside Burman villages, especially on the borders of Sandoway and Gwa townships. The Chins found in this district have been so long separated from the parent stock that they retain few characteristics of the race. The men dress like Burmans, and the women are taking more and more to the Burmese *lôngyi* and jacket, they however retain under the *lôngyi* the small loin cloth or "*nhi*," and fasten it as low down as is done in all Chin land. Some of the older women wear a dark coloured smock-frock called by Burmans a "*Thin-daing*." This however is not a "wild" Chin garment, and must have been fashioned by Chins as they became "tame" and wished to clothe their nakedness. The custom of tattooing the faces of the women is dying out, and the practice of burning their dead is, owing to the influence of the American Baptist Mission on the decline. A full account of the Chins is given in Mr. Houghton's note attached as an appendix to the Census report of 1891.

urman Iaho- edans. There are two distinct groups of Burman Mahomedans. The more numerous and older group known as *Kamans* from the *Urdu* word for a bow, are descendants of the archers

among the followers of the unfortunate Shah Shuja. These after he had been murdered took service under the Arakanese kings. They came here from Ramree, speak the Arakanese dialect, and are found in four villages 3 miles west of Sandoway and in three villages of Thade circle north of Sandoway. The other group known as *Myedu* is found only in Sandoway town. They speak Burmese and claim to be descendants of the Mahomedan portion of the garrison left in Sandoway after the Burman conquest. They call themselves Myedu because their progenitors came lastly from Myedu in the Shwebo district. In 1852 the members of both groups numbered about 1,500; in 1872 the total was only 1,587, but in 1901 the number was given as about 3,000 and in 1911 as 3,676. Except in their religion and in the social customs their religion directs, these Burman Mahomedans are not distinguishable from their Burmese and Arakanese neighbours.

Nati of In

As in the case of Kyaukpyu families of Mahomedans and Hindus have long been established in the district, many are descendants of officials imported at the annexation. The rest of the natives of India are immigrants mostly from Bengal and Chittagong. A few are fishermen from the Madras coast. They numbered 504 in 1872, 1,474 in 1901, and only 961 in 1911.

Lins.

Mention may be made here of an extinct race called Lins, who formerly inhabited a part at least of the Sandoway district, and whose name appears in the palm leaf chronicles as one of the tribes then living in the country. It is not unlikely that the Lins were a tribe of the same origin as the Chins, but nothing certain can be predicated concerning a people who died out so long ago. The only traces of their existence are found in the village names Lin-tha, Lin-thi, Lindi, Lingôn, and in Lin-mudaung or hill of the drunken Lin.

Lan- guag

The prevailing language is Burmese. In this term Arakanese is by degrees being included, because the dialect spoken in this district is of a far less pronounced type than that spoken in Kyaukpyu and Akyab. The census figures show that 5,375 fewer persons spoke Arakanese in 1911 than in 1891.

Chin is spoken by 8,000 persons; Indian languages by 960, the chief of which is the Chittagonian dialect of Bengal. The Chin language spoken here has varied so much from the languages spoken by cognate tribes in the Chin Hill Tracts that it is almost a different language. There are few Chins who do not also know Burmese.

Relig

In 1901, 87 per cent. of the population were Buddhists

The religion however is not professed in the living way it is in Upper Burma or even in parts of Lower Burma; pagodas are comparatively rare, *pôngyis* are not so numerous as in Burma and the people lay little store by them. It is quite common to hear of a *pôngyi* being maltreated by a section in the village. The *kyaungs* when not dilapidated show that a general lack of interest is taken in them, and one rarely comes across an inhabitable *zayat*. Animists numbered 6,500, they are found entirely among the Chins. Mahomedans numbered 3,900 and there are 558 Hindus. The American Baptist Union has a Mission among the Chins which dates back nearly fifty years, it has a Church and a school at Sandoway. Of the 528 Christians enumerated in 1901, 477 were natives and the bulk of the latter were converts of this Mission.

CHAPTER IV.

AGRICULTURE AND IRRIGATION.

Condition in pre-annexation days—Progress—Classification of agricultural lands—Gardens—*Kaing*—Paddy land soils: Coast lands; Inundated areas; Loams; Uplands—*Taungyas*-Irrigation—Chief crops—Paddy: Mode of cultivation; Varieties—Tobacco—Sugarcane—General condition of agricultural population—Sales and mortgages.—Landlords and tenants—Labour—Agricultural stock—Grazing grounds—Ploughs and carts—Agricultural loans.

ondition i pre- nnexa- on days.

The records show that a few months after the district had been formed in 1827 an enquiry which was held estimated the cultivated area at 6,000 acres, including nearly 1,000 acres of *taungya*, and the population at 20,000. It also stated that only 1,516 families, or little less than one-third of the population, were agriculturists. The records show that during the next 15 years the cultivated area increased by a little less than 300 acres a year. From these facts it will be seen that Sandoway was not an agricultural country in pre-annexation days. At that time besides the *taungyas* little more than the best paddy lands, which lie along the banks of the larger rivers and are 8 to 10 miles from the sea, were under cultivation. On each of these rivers and near each patch of cultivation there was an agricultural village or two; between these rivers and above these lands the country was covered with dense forests of

bamboo and valuable timber, with only here and there a small hamlet where a clearing had been made; below these lands mangrove swamps extended over a wider area than they do now. By far the greater part of the population lived near the coast and depended on occupations other than agriculture for a livelihood; fishermen, boatmen, boat-builders, salt-boilers, and wood-cutters were far more numerous than they are now. It is only since the annexation, and then only by slow degrees, that the district has changed and is now an agricultural one giving employment, in whole or in part, to about 81 per cent. of its population.

The progress made in bringing land under cultivation is shown by the figures below. Land measurement was introduced in the year 1832 and the area in that year was found to be 7,101 acres. Five years later in 1837 it was 8,592 acres, and six years later in 1843 it was given as 10,095 acres. After that each decade shows the following area:—1853, 17,007; 1863, 24,040; 1873, 47,960; 1893, 55,214; 1903, 64,705; and the area in 1910 was 82,589. The rate of increase has all along been slow because the cultivable waste lands do not consist of large tracts of flat country as in delta districts. Agriculture began on the middle lands; extensions meant on the one hand laborious fellings of heavily timbered jungle on the uplands, or on the other hand fellings nearly as laborious, together with the construction of bunds in mangrove swamps. In the first twenty years after 1843 the average rate of increase was 700 acres a year, in the next decade this rate was nearly doubled because in that period the greater part of the tract that had been given to Bassein was restored, in the following thirty years up to 1903 the rate dropped to 1,000 acres a year. After that there were large increases shown in 1904 and again in 1907, owing to extra areas having been found by more accurate surveys. The present normal rate of increase may be taken to be 1,000 acres a year; but this rate is liable to decrease unless the reclaiming of mangrove swamps is specially encouraged. It requires large expenditure of capital to make these lands cultivable and the ordinary agriculturist has not the means to do so.

The total area of the district in acres is 2,421,760, of which only about one-twentieth or 119,760 acres are estimated to be fit for cultivation. In 1910 there were 82,589 acres occupied by cultivators, who held 71,379 acres of paddy lands (including 5,988 acres of *taungyas* or hill-side paddy), 6,140 acres of garden lands, and 5,070 acres of *kaing* lands.

ardens. Garden lands include 3,581 acres of *dani* (*nipa fruticans*). This palm is grown on edges of salt water creeks, partly for the sake of the leaf which is used in thatching houses, and partly for the sake of the juice extracted from it which is known as the Excise *tari*. The value of thatch obtained from an acre of *dani* is from seventy to eighty rupees. Gardens proper are scattered about on higher lying land in all the *kwins*; but there are few plantations of entirely one kind of tree, the most common of these are plantains and cocoanuts, the latter kind being found only near the coast. The kind of garden most commonly met with is a small enclosure containing a few plantains, jackfruit, pineapples, mangoes, sweet limes and cocoanuts, planted round some kind of a dwelling house. No fruit culture is practised and all the fruit in the district is of inferior quality.

ing. *Kaing* is the name given to lands which are found wherever fresh water streams overflow their banks and deposit a thick layer of silt. The locality of these lands often changes, also their productiveness. On them are grown vegetables, chief of which is chillies, and miscellaneous crops, chief of which are tobacco, sessamum, and in the northern portion of the district hemp. The area of *dani*, garden, and *kaing* lands vary but little from year to year, the annual increase in the cultivated area is to be found chiefly in paddy lands.

ddy d soils. The paddy lands contain no pure clays, the soils are loams more or less sandy. Owing to the configuration of the country there are no large homogeneous tracts; in the same *kwin* there may be lands, which nourished by drainage from surrounding hills, produce bountiful crops, and adjoining them there may be water-logged areas or stony slopes which grudgingly yield a crop at all. Paddy land soils may be divided into the following four classes.

ast ds. The coast lands stretching from Padin to Gwa consist of sand with just enough clay to invite cultivation. Generally the cultivating of these lands forms the subsidiary occupation of fishermen, fish-curers, boatmen and salt-boilers. They comprise about one-ninth of the cultivated area of the district and their outturn is 15 to 20 baskets an acre.

n- ed as. Next to these are the lands subject to regular inundations of salt water, where the chief labour of the agriculturist is using his spade to keep out the water that will rob him of his crop. These lands are in depressions just behind the coast or lie along the inner fringe of mangrove swamps. The soil, though still sandy, contains a larger proportion of clay, and has also a large amount of decomposing vegetable

mould. The outturn at present is 20 to 25 baskets an acre, but most of these holdings are excellent paddy lands in the making. About two-ninths of the cultivated area and three-fourths of the culturable waste belong to this class.

Loa

Then comes the loams, the rich lands of the district. They are on the banks of the chief rivers in all three townships, but more especially in the northern portion of the Taungup township. They are enriched yearly by the silt brought down in the rains from the surrounding hills, and sometimes by the sediment deposited by the overflow of the rivers. The agriculturists here have nothing to dread except the occasional attacks of caterpillars, and in very exceptional years a failure of the rains at the time when the crop is coming into ear. As a rule the regularly recurring seasons give an assured outturn of 40 to 50 baskets, in some cases reaching 60 to 70 baskets an acre. These lands comprise the main portion of the old *kwins* and include about two-ninths of the cultivated area of the district.

Upl

Behind these are the stony slopes which never hold water for long, and are denuded by the rush of water to the lower lands just described. They have been formed by the poorer class of cultivators, who aspiring to set up as land owners have with great labour terraced the uplands into a precarious holding. When at their best these lands produce 25 to 35 baskets, but they soon get exhausted and in them are to be found the bulk of the yearly tale of fallows. They comprise about four-ninths of the cultivated area and about one-fourth of the culturable waste.

Tau yas.

At the back of all lurking round corners are the pernicious *taungyas*. The area of these fluctuates from year to year and is a gauge of the watchfulness of district officers in trying to check this form of cultivation. *Taungyas* are mostly felled by Chins and Burmans, Arakanese rarely do so.

Irrig tion.

The district has no system of irrigation. Where this is required in the uplands the formation of the country does not lend itself to the carrying out of unskilled plans on any large scale; the most a cultivator does is to bund a stream and let the water flow on to his land. Nor would engineered projects be generally feasible; the high banks of the rivers and the steep hills along which they flow would make a project very costly, and there would not be a sufficient return for the outlay. Fortunately the district has on the whole a regular rainfall and the need for irrigation is not much felt.

ief ps.

The six chief crops of the district in 1910 in order of importance were paddy 71,379 acres, *dani* 3,581 acres, tobacco 1,826 acres, chillies 1,147 acres, sessamum 833 acres, and sugarcane 788 acres. As has already been mentioned paddy alone increases from year to year, the areas under other crops vary but little from one year to another. Formerly the area under sugarcane used to be about the same as that under tobacco, but during the past ten years it has been steadily decreasing, because the soil on plots fit for sugarcane has become exhausted. Cotton and sessamum used to rank next after tobacco but they have been ousted by the higher price commanded by chillies. Groundnuts were introduced a few years ago but owing to the absence of a market the cultivation of this crop has not found favour. A crop that was formerly grown but has entirely disappeared is mulberry. Indigo is no longer a field crop. The district is well suited for the cultivation of rubber and there is a likelihood that this plant will soon be introduced.

ddy: de of tiva- n.

The Burmese *tè* is only just being brought into the district, the plough in common use is called an *at*. This is an implement, which as its name signifies has a narrow, pointed, needle-like shape; but in its more modern form there is an inlay of iron on the upper part of the point. Ploughing with the *at* is a longer and more labourious process, because it only digs into the soil and does not turn the clods over as the *tè* does. When an *at* is used the land has to be ploughed twice, the second time crosswise to the first. After that, the clods are broken up and all grass and weeds are shaken out of the soil by five to eight turns with a harrow or *tun* (but in the country south of the Kyeintali river the *tun* is generally the only implement used). Most of the grass and weeds have by the action of the *tun* been crushed and worked into the soil, the remainder is heaped on the *kazins* or bunds enclosing the paddy fields. Then when the soil has been quite cleared the surface is reduced to evenness by dragging a beam called a *kyandôn* over it. Immediately after this has been done women are employed to put down the seedlings taken from the nurseries.

rieties.

Paddy is divided into three kinds according to the time each takes to ripen. First there is the *taungya* or *kaukyin* which can grow on almost dry lands and is reaped in October. Next is the *kauklat* which requires a soil only a little more wet and is reaped in November. The last is the *kaukkyi* grown on low lying land and reaped in December. About twelve varieties of each kind are sown. Of the

taungya kinds *sinchi* is the quickest growing, it ripens in three months and is a slightly red grain, *ngapyugale* takes longest to ripen; these kinds can also be grown in regular paddy fields; the most common *taungya* grains are *si-li*, *lôn-hat* and *dale-me*. The *kauklats* form the bulk of the paddy crop of the district, being sown on the uplands mentioned above; the quickest growing kind is *let-yôn* which ripens in 3½ months, the latest to ripen is *let-taw-ywe*. The most commonly sown *kauklats* are *letywe*, *lemanaing* and *tidawmo*. The *kaukkyis* yield the best rice but grow to perfection only on the best lands; the quickest growing of this class is *byatwa* which ripens a fortnight later than the latest *kyauklat*. It is the finest rice grown in the district but is too good for the general market, it is sown on carefully selected fields and is reserved for consumption on special occasions. The kind that takes longest to ripen is *nga-kywe*; the most common market crops of *kyaukkyi* are *nga-kywe*, *ah baung-nu* and *kye-byu*. A grain lately introduced from the east is known as *thôn-sa-do*, and is coming into favour as a crop for home consumption, because as its name signifies it swells most in cooking.

The misfortune most feared by the paddy cultivator is the *Daungdè* or caterpillar of the *Spodoptera Mauritia-Boisd* moth, which appears in September if the early rains have been scanty; in the presence of this pest the cultivator sits down hopeless.

Sandoway tobacco has always had a good name, and the best tobacco in the district is grown on the *kaing* lands along the banks of the Kamyit or Kyaukkyi river. In 1845 samples were sent to an exhibition in Calcutta and were pronounced to be the best that had been inspected. It is not known how the plant was introduced and the one grown now is not derived from any well-known foreign tobacco; for in 1854 Havanna and Java seed, and in 1864 American and Indian seed were tried, but all experiments ended in failure. The chief localities where tobacco is grown are the richer *kaing* lands on the middle reaches of the Kamyit, Sandoway, Zein and Bye streams in the Sandoway township, and along the Taungup river. The modes of cultivation and of curing are the same as those practised in other parts of Burma, and described on page 428 of Volume I and page 617 of Volume II of the British Burma Gazetteer. Those descriptions need not be repeated here, but the peculiarity that in this district planters do not sow their own seed but have to depend on nursery-men for seedlings, may be explained. At the time for sowing in September the only soil dry

Toba

enough to germinate seed, are some of the sandy lands near the coast miles away from the tobacco plantations. The best of these lands stretch from the mouth of the Sandoway river to Andrew Bay and are regularly used as tobacco nurseries. Just before the rains the nursery-man travels up to the tobacco plantations and helps himself to seed from any plantation whatsoever, but there are planters who reserve their seed for those who agree to let them have young plants at a cheap rate. Nothing is ever done to maintain or to improve the quality of the seed, leaves are plucked from all plants and then they are allowed to run to seed. In November when the seedlings are two or three finger-breadths in height the planters go to the nurseries and buy at an average rate of four rupees for 10,000 plants. The way in which the leaves are packed for market may also be described. After they have been cured, a bamboo skewer of a length measured from elbow to first joint of the little finger of the packer, is run through the stalks of 32 to 40 leaves. This arrangement is called a *thidan* and ten *thidans* tied together is called a *po*. Market quotations are always for 100 *po*, and the price varies according to the size of the leaves. The present price for the largest size is 90 rupees, for the next size 60, and for the smallest 30 rupees. Prices have been rising since steamers ceased to call and less tobacco has consequently been imported. The value of the outturn of an acre is 80 to 90 rupees.

ugar-ne.

Of the five kinds of sugarcane known in the district four are annual crops grown on *kaing* lands, they develop thick stems and are sold as canes. The fifth called *pan-gyan* has a thinner stem which is reddish in colour, it is the only kind which yields juice in sufficient quantity and consistency to pay being boiled down into *jaggery*. It is grown on hillsides, and a plantation is started by putting down cuttings as soon as the rains commence. The cuttings are six inches long and contain two joints of a cane, they are placed two cubits apart at an acute angle to the ground, and are pressed in until the lower joint is well under the soil. Six canes generally sprout from each cutting, and are ready to be gathered in January following the second rains. When the canes are cut a three-inch stump is left, and a new crop sprouts from these stumps. Two more crops are got in the same way and after that the cane becomes too poor to be of any use. The stumps are then covered with rubbish and burnt and a crop as good as the first one springs from the stumps thus renovated. In each of the two following years a crop is again obtained from the stumps, and after seven

crops in all have been got the plantation is abandoned. The value of the outturn of an acre of sugarcane is as high as 200 rupees.

Gen cond of ag cultu popu tion.

The average size of a paddy holding in 1910 was 3·78 acres, of a garden 0·67 acres, of a *kaing* plot 1·04 acres and of a *taungya* patch 2 acres. In the same year there were 17,528 families, or about 81 per cent. of the population engaged in paddy cultivation, and of these nearly 3,000 families worked *taungyas*. The average area of paddy land held by each family is 5·84 acres, and the average number of persons in a family is six. Statistics gathered at settlements show that this is but little above the minimum area required to support a family, therefore most paddy cultivators have to fall back on subsidiary occupations; about one-half own gardens, and about one-third raise miscellaneous crops on *kaing* lands. Nearly 900 families follow agriculture as a subsidiary occupation; as has been already stated they are chiefly found on the coast lands. There is no wealth among the agriculturists nor is there any extreme poverty. Taking the district as a whole about 4 per cent. of these families are indebted, and the average amount of debt is 52 rupees; but a good deal of the debt has been incurred by speculations in cattle trading. So far not quite 9 per cent. of the land has passed into the hands of money lenders.

Sales mort ges

The sale and mortgage values of lands are high even for Arakan. In the past few years the average values for the whole district have been 60 and 25 rupees respectively per acre. In the Taungup and Gwa townships the sale value is between 35 and 40 rupees, but in the Sandoway township it is nearly 90 rupees, while in the vicinity of Sandoway town it is as high as 150 rupees an acre. Everywhere the pressure of the agricultural population on the land available for cultivation is very great. Mortgage values fluctuate a good deal, depending as it does on whether or not the cultivator has had a good crop and has sold it to advantage. It has been as low as 12 rupees in Taungup, and as high as 45 rupees in Sandoway.

Land lords tenar

There are 2,237 landlords employing 2,649 tenants, and of the total cultivated area the percentage worked by tenants is 0·12. The average amount received in rent by landlords is 41 rupees, and the average amount paid by a tenant is 35 rupees; these amounts are low for Arakan because tenants are difficult to find. The average rent per acre paid by a tenant is about six rupees, it is generally paid in kind.

Labo

Labour is plentiful being found chiefly among the smaller land owners; generally labour is hired only for ploughing

and sowing, reaping is usually carried out by the co-operation of cultivators. Formerly a labourer's wages were one basket of paddy a day and his food, latterly owing to the rise in the price of paddy, wages are being paid in coin; a man is paid 18 to 20 rupees for the ploughing season, eight annas a day for transplanting, and 4 rupees an acre for reaping; a woman is paid six annas a day. All labourers are provided with food. The hire of cattle is still paid in kind, and is 30 to 35 baskets of paddy for a pair of plough cattle. The cultivator and his family always do the threshing, winnowing and storing of the grain.

Agricultural Stock.

At the time of the annexation the stock consisted entirely of buffaloes. There were few cows and bullocks and the latter were used only as pack animals. Immigrants from India appear to have taught cultivators to use the cheaper bullock, and even the cow, for ploughing. As late as 1853 there were 16,354 buffaloes to only 2,332 cows and bullocks, twenty years later the numbers were 23,036 and 7,329, respectively, and in 1883 they were 25,324 buffaloes to 12,061 cows and bullocks. But after that people learnt that buffaloes cost more to feed, require more tending, and are more liable to contract cattle disease. They sold off their buffaloes in greater proportion than their bullocks, and paid more attention to raising a stock of the latter, for in 1900 there were 16,828 buffaloes to 13,662 cows and bullocks. This tendency continues and now the tables are turned, for in 1910 there were 24,451 cows and bullocks to 21,874 buffaloes. No systematic cattle breeding is practised. There is more than a sufficiency of cattle for agricultural requirements and every year numbers are driven down the Gwa road into Bassein for sale. This trade in cattle has continued unbrokenly from Burmese times.

Within the district the average prices are 20 rupees for a cow, 30 to 40 for a bullock and 50 to 60 for a buffalo. Cattle disease is comparatively rare, it is said that this is due to the owners supplying drinking water to their cattle from wells during the hot weather, instead of allowing them to drink from stagnant pools.

Grazing grounds.

The stock is not stall-fed nor are any fodder crops raised. There are 51 reserved grazing grounds measuring 3,737 acres, but most of them are not very suitable for grazing, being covered with large trees under which little grass can grow. Fortunately near most villages there is abundance of grass on abandoned *taungyas* and on the lower hills; it is only in the older *kwins* and in the coast lands, that any difficulty is experienced in obtaining grazing for cattle. In

the former areas cultivators have often to let fields lie fallow in order to graze cattle, and in both tracts paddy straw is stored for fodder.

Ploughs and carts

Owing to the area held by each family being small the proportion of ploughs to cultivated area is above the normal for the province. In 1831 there were only 1,168 ploughing implements, in 1911, excluding *tuns* or harrows, there were 10,122. In the latter year there were only 619 carts in the district, and the number has risen to this figure very slowly because the country is not suited for cart traffic. Grain is carried from the threshing floors to the granaries by members of the cultivator's family, and most granaries are within easy distance of streams navigable for paddy boats.

Agricultural loans.

Few cultivators apply to Government for loans. In the last twenty years loans have been taken in only twelve years and only twice has the total sum borrowed exceeded Rs. 500. All the loans have been for the purchase of plough cattle, none for the improvement of land. Steps are being taken to teach cultivators to combine and take joint loans for the purpose of reclaiming mangrove swamps. The operations of co-operative credit societies have not reached the district as yet.

CHAPTER V.

FOREST AND MINERALS.

Mangroves—Dry Forest—Evergreen—Principal timbers : *Pyinkado* ; *Pyinma* ; Teak and *Padauk* ; other woods—Reserves—Administration—Revenue—Minerals : Coal.

About 3,572 square miles or about 94 per cent. of the area of the district is covered with forests, varying in kind according to the elevation of the land from sea level to a height of about 4,000 feet. Each tract described in the preceding chapter has a different type of forest growth.

Mangroves.

Wherever the sandy coast is elevated enough to be beyond the reach of rising tides it is lined with Casuarina equisetifolia (*Palin-bin*). In the tract liable to salt water inundations are dense mangrove forests. The chief species found therein are the mangroves proper, Rhizophora Mucronata and R. conjugata locally known as *Byu*, Sonneratia apetala (*Zi-bin*) whose drooping branches are so realistic of the willow, Ægiceras corniculata (*Bu-thayat*), Tamarix Indica (*Tayaw-bin*), Carpa moluccensis (*Pyenan*), and C. obovata (*Pinle-ôn*) with its great cocoanut-like fruit. As the land gradually rises and the permanently

inundated area is left behind mangrove forests give way to Heritiera littoralis and H. minor (*Pinle-Kanazo*), and to Avicennias, Erythrinas, Cordias and the holly like shrubs of Acanthus ilicifolius (*Hpetyan*).

Dry Forest.

On reaching still higher ground dry forest appears and forms a belt along the lower hill slopes up to an elevation of about 1,000 feet. This belt varies in width from one to ten miles and stretches along the entire length of the district except where paddy cultivation and *taungya* intervene. This is the area supporting the most valuable trees such as Xylia dolabriformis (*Pyinkado*), Lagerstroemia flos reginæ (*Pyinma*), and its allied species Cedrela toona and serrata (*Thitkado*), Hopea odorata (*Thinganet*), Pentace Burmanica (*Kashit*), Dipterocarpus tuberculatus (*In*), D. lœvis (*Kanyin*), and D. turbinatus (*Kanyaung*). As we advance further towards the Yoma the slopes become steeper and more precipitous. On their western and southern aspects there is a dry crumbly soil and forest growth is poor with trees stunted and ill-formed; the inhospitable nature of these aspects is further evidenced by the growth of Euphorbias. The northern and eastern aspects show a tendency towards evergreen forest.

Ever-green.

Closer to the main ridge dense bamboo forests clothe the southern and western slopes. On the other slopes and on the higher peaks the forests met with are true evergreen, with cane brakes and palms towered over by giant trees of enormous girth and bole. Of these the wild mango (Mangifera sylvatica) and *Thin-bôn* (Buchanania lancifolia) attain girths of over 20 feet, and sending up clean symmetrical boles interlace their crowns at a height of 200 feet. *Taungsagaing* (Anisoptera glabra), *Taungsaga* (Michelia), and *Taungpeinne* (Artocarpus chaplasha) also attain heights sufficient to yield boat hulls 60 or 70 feet in length. Here too is found Antiaris toxicaria (*Hmyaseik*), the deadly "upas tree" of Java, the juice of which Chins use for poisoning their arrows. Among the smaller vegetation may be mentioned the wild cinnamon, and in the stream beds clinging to the rocks the myrtle Eugenia with quite an edible fruit. The above remarks refer to the portions covered by tree forest. By far the greater part of this area is bamboo jungle, dotted here and there with a stray tree, or a patch of scrub jungle, the whole interlaced with various creepers mostly of the order Combretum. The prevailing bamboo is *khayin* (Melocanna bambusoides), whose culms coming up at close intervals monopolize the hillsides and only too effectually prevent tree growth

springing up. This is the legacy left by the *taungya* cutter.

The chief timber tree is *Pyinkado*. It is the only reserved wood which is largely exported, chiefly in the form of large scantlings to Akyab whence it is taken to Chittagong. The tree is fairly plentiful but it is found in blocks in only a few localities. In the Taungup township these areas are the headwaters of the Sabyin stream, the tract between the Tanlwè and Taungup rivers, the foot of Yankaw hill, and the ridge running from the headwaters of the Kayaing river to Shwele. In the Sandoway township a small patch occurs near the headwaters of the Zeinchaung, but the largest compact *Pyinkado* bearing area in the district lies between the Sandoway-Gwa road and Andrew Bay. In the Gwa township there is one small patch on the right bank of the Yahaing river. Owing to the isolated nature of its occurrence brought about by the tree having in former years to give way to paddy and *taungya* cultivation, the inclusion of *pyinkado* in reserves has not been found practicable. The rigid application of the forest rules may preserve the tree for a short period but its final extermination is inevitable. Principal timbers: *Pyinkado*.

Pyinma which is found in the same localities as *Pyinkado* is of next economic value. It is not however much worked, the tree being plentiful round Akyab which is the only market for timber extracted from this district. *Pyinma.*

Teak and *Padauk* are not found as indigenous trees. About the year 1830 some immigrants from the east planted teak seed on three low hills near Taungup, later two speculative cultivators in the Thade and Sandoway circles took out grants of small areas to plant with teak; but these plantations are failures. *Padauk* has been planted as an avenue tree at the headquarters of the three townships. Teak and *Padauk*.

Among less important woods there is a large export of *Kabaing* (Ceriops Roxburghiana) poles from the mangrove forests both to Akyab and Chittagong, for the walling and flooring of houses among the poorer classes. A certain amount of timber is used for building large sea-going cargo boats of English design, the woods most in demand being *Talein-gaung* (Bassia longifolia), *Pyinma* and *In*. The first is said to resist the attacks of *Teredo navalis*. Of woods suited for furniture may be mentioned, *Thitkado*, *Taungsaga*, *Mani-awga* (Carrallia integerrima) and *Thit min* (Podocarpus neriefolia). Bamboo and canes are exported in large quantities to Cheduba Island and to Akyab. If the manufacture of paper from bamboo prove a commercial success there is an inexhaustible supply to be had from this district. Other woods.

Reserves. None of the forest areas has been found suitable for reservation. Where the more important woods are plentiful the forests are intersected by small blocks of cultivation, and high up in the Yoma are few trees there that are considered at present to be of any economic value. For these reasons the proposal to reserve the area between the Ma-i and Taungup rivers stretching up to the Yoma was abandoned.

Administration. Sandoway belongs to the Pegu Forest Circle. Previous to 1905 the forests were under the sole management of district officers supplemented by three forest guards; the Deputy Commissioner granted all permits and *thugyis* measured logs and collected dues. But in this year a Divisional Forest Officer was posted to Akyab, and Sandoway became one of the ranges in his charge. The district was divided into seven beats, the southern limits of which were the following rivers, the Sabyin, Maung, Kayaing, Sandoway, Kamyit or Kyaukkyi, Satthwa, and Kyaukchun. A forester was placed in charge of each beat with headquarters at Mawywa, Tanlwè Ywama, Taungup, Shwele, Sandoway, Kyeintali and Gwa, respectively, and a Deputy Ranger was stationed at Sandoway to be in charge of the range. Also five Forest Revenue stations were established with a Revenue Collector at each.

But it was soon felt that this arrangement did not afford enough supervision over the growing timber trade of the district and in 1908 the following arrangements were made. A Subdivisional Forest Officer whose charge included Kyaukpyu was posted to Sandoway and the district was divided into two ranges. The one to the north of the Sandoway river is known as the Taungup range, it includes four of the above beats and a fifth made up of the country between the Kaleindaung and Padin rivers with headquarters at Ngamaukchaung. The one to the south is known as the Sandoway range and includes the other three beats. At the same time more suitable places were selected for Forest Revenue stations, and one more was added to the list. The Revenue stations are now at Ma-i, Tanlwè-Ywama, Taungup, Kayaing, Kamaungdôn and Sandoway. A steam saw-mill at Gyiwa was also taken under proper supervision and a saw-mill overseer was stationed there.

Revenue. It was in 1833-34 that forest revenue first appears as an item in the district revenue accounts, in that year and in the following years a sum of about Rs. 500 a year used to be realized from minor forest produce. Timber extracted for trade purposes was first taxed in 1863, evidently on account of the large fellings of *pyinkado* for railway sleepers

and telegraph posts. A royalty of one rupee a tree was taken and no tree under 6 feet in girth was allowed to be felled. In 1863-64, Rs. 1,241 was realized. In 1865 the Arakan Forest Rules were published and brought into force. Under them the royalty continued to be one rupee a tree but the minimum girth for felling was fixed at 4½ feet measured at 3 feet from the ground. The revenue derived however remained about the same as before, rarely exceeding Rs. 1,000 a year. A rise to about Rs. 3,000 a year took place in 1895-96 when the amount of royalty was increased, and a second rise to about Rs. 7,400 in 1902-03 when the royalty was again increased. The present demand for timber began in the year in which the Forest Department took over the management in 1905-06. The revenue in that year was Rs. 20,500, in 1908-09, 1909-10 and 1910-11 it was Rs. 36,500 in each year; it now ranks fourth in the list of principal heads of revenue. The flourishing state of the timber trade is inducing traders to employ elephants to extract logs and now there are five working in the district.

Minera
Coal.

Outcrops of coal occur in the upper reaches of the Sandoway river and its feeders, also near the coast south of Andrew Bay. In 1891-92 five specimens were sent to be analysed, but only the specimen got from the Zeinchaung, a feeder of the Sandoway river, was favourably reported on and when burnt in a launch was an unqualified success. As, however, the borings showed that the coal did not extend to any great extent, interest in the matter dropped. In 1904 some coal was found 3 miles from Taungup and on being analysed was reported to be quite a good coal for India, but after half a ton had been got and tried in a launch it turned out on further examination that the supply was exhausted. The only other minerals that have been found are mentioned under the head of geology.

CHAPTER IV.

OCCUPATIONS AND TRADE.

District of small enterprises—Occupations: Fishing; Extracting timber—Manufactures: Pottery; Salt boiling; Jaggery; Mat-plaiting; Thatching; Silk and cotton weaving—Artisans—Industries: Country boat building; Extinct industries—Factories—Slavery—Commerce and trade: Water-borne; Inland; Exports and Imports; Sandoway Port.

Distric of sma enter-prises.

There is a variety of occupations but all are of a petty

nature. The isolated position of the district, which has the barrier of the Arakan Yoma on one side and a coast line without any port for large sea-going vessels on the other, has led to there being a variety of manufactures and industries in order to meet local requirements. But the sparseness of population coupled with the absence of an outside market, prevents the development and expansion of any of these enterprises. And the chief feature about all occupations is that there is hardly a single one, even including agriculture, which by itself can provide the entire means of livelihood of those who engage in it. Consequently it is generally found that the inhabitants of this district follow at least two pursuits. Most of the occupations mentioned below are described on pages 410 to 421 of Volume I of the British Burma Gazetteer and a description of them need not be repeated here; but where necessary a few notes are added.

Occupations: Fishing.

After agriculture the occupations most largely engaged in are fishing and the extracting of forest produce. Except for a few natives of Madras there are no professional fishermen, yet in almost every coast village fish-curing, especially of a kind of whiting called *nga-nitu* or *nga-sitsali*, and the manufacture of shrimp *ngapi* is carried on after the rains. There is not much profit in these ventures because the catches are small, the price of salt fish is low, and the cost of upkeep of boat and nets is heavy.

Extracting timber.

The demand for railway sleepers at Chittagong and for house building timbers in the Akyab district has lately given a great impetus to the timber trade. It is most flourishing in the southern halves of the Taungup and Sandoway townships. The timber has to be sawn up at or near the site of felling because the traders are not rich enough to use elephants to drag out big logs, and the employment thus given to woodcutters and sawyers has placed these occupations third on the list. The heavy losses caused to timber traders by the misdeeds of sawyers led to the Workmans' Breach of Contract Act being extended to this district.

Manufactures: Pottery.

Manufactures are of no importance, and of these there are only two which are of the nature of a profession followed by a particular class. They are potmaking and salt-boiling, but the profits made by those who engage in them are so small that they live a life which is little better than that of outcasts. Potmaking is carried on at Kinmaw five miles west of Sandoway, and near Natmaw one mile west of Taungup. The turnout consists of ordinary village unglazed water pots, cooking pots, and nothing else.

Salt-boiling is carried on at Kyanyo about 20 miles south-west of Sandoway where iron cauldrons of ten gallons capacity are used, and in the low-lying lands near Kaleindaung hill where earthen pots of five gallons capacity are used. In the former locality brine is got by filtering sea water through an efflorescence scraped off the surface of the land, in the latter brine is got from evaporated sea water which has been let into shallow tanks. At both places the same way of finding out when the brine has reached saturation point is followed, when boiled rice floats on the brine it is ready for the boiling process. Until 1895 the manufacture of salt was a flourishing business which was engaged in all along the coast, and afforded means of livelihood in a tract where agriculture cannot do so. In the year just mentioned 34,000 maunds were manufactured. In 1896 the policy of suppressing local manufacture which had been inaugurated in 1889 was further enforced by restricting the area in which salt-boiling was to be allowed. It was notified that the manufacture of salt would be allowed only in 8 *kwins* in Taungup, 1 in Sandoway and 17 in Gwa, and the production fell to one-half the previous quantity. Since then in continuation of this policy the area of manufacture has been further restricted. Now it is allowed in only 5 *kwins* in Taungup and one in Sandoway. In 1910 the outturn was only 4,000 maunds. The industry is doomed to extinction because under orders from the Government of India, licenses for the manufacture of salt can be given only to persons who held licenses in the preceding year. Salt-boiling.

Jaggery is made in mills driven by cattle by those who grow hill-side sugarcane, the outturn varies from year to year but there is a large export trade to Akyab. It is estimated that about 500 tons are exported every year. Jaggery.

Mat-plaiting and thatch-making are universal. Rough mats are made of thin strips of bamboo after the rind has been peeled off, and are known as *hnyi-pya*. They are used for wallings of houses and to spread on floors. A finer mat is made of strips of the *thabaw* or screw-pine (Pandarus furcatus). The leaf of this plant resembles that of the pine-apple, but is longer and the edges and the midrib are lined with thorny spikes. After the edges have been cut off the leaf is divided down the middle, and the halves are dried in the sun for two or three days; the strips are then woven into a smooth mat which rolls up easily and is used as a bed by the ordinary Burman. Neither kind of mat is exported. Thatch is made from the leaves of the *dani* palm Mat-plaiting. Thatch making.

which have been soaked in salt water streams for thirty days. As a means of livelihood it is carried on in the central part of the Taungup township, from where large quantities are exported to Kyaukpyu and Akyab. Silk and cotton weaving is common in most villages, where the women work on hand-looms to supply local demands. A finer kind of silk, which is held in good repute and is sold by its weight in silver, is woven in Sandoway and in the villages close by. The Chins weave and embroider shawls of good quality and artistic design.

Silk and cotton weaving.

Artisans.

The artisan class has always been scarce. An effort was made in 1838 to increase the number by exempting all artisans from paying capitation tax; but although the concession remained in force for many years it did not have the desired effect. Native blacksmiths and bricklayers are unknown, there are few carpenters and goldsmiths, and their work is of the crudest.

Indus-tries.

The largest industry is boat building which ranks fourth in the list of occupations. It is grouped round two centres, the first is in the corner in which the three circles of Padin, Pantaw and Kayaing meet, and near which several streams enter the sea within a short distance of each other; the second is in the neighbourhood of Gwa. The first turns out country boats but this industry is declining owing to the heavy royalty that has now to be paid on the kind of timber which forms the foundation of these boats. At the other centre cargo boats of English pattern are built, this industry is a new one and is said to have been introduced by a man who learnt boat building in the yards of the Irrawaddy Flotilla Company. It is thriving because traders have discovered that by means of these boats they can reach a new market at Bassein.

Country boat building.

The Arakanese country boat like Burmese country boats of more primitive designs, has a wide keelless hull, with sides built up of planks laid edge to edge lengthways along ribs fixed in the hull. But the chief peculiarity about the Arakanese boat is that its timbers are held together without the help of any kind of metal. The planks are literally stitched to each other with cane hence the common name of *chôk-hle* or stitched boat. Another peculiarity is that the hull is fashioned by one class of artisan, and the building up of the boat is done by another. A person who wishes to have a boat built bargains first with the former about the hull, which is generally hollowed out of *Thingan* (Hopea odorata). The price to be paid is governed by the width to which the *thingan* trunk is to be opened out. This

width is calculated by measuring the inside curve of the rough hull, and the unit of measurement is a *baw* or half cubit. The number of *baws* in the hull will also be the measurement of the beam of the boat when finished. The price usually paid for making a hull measuring 10 *baws* is 90 rupees, and the price increases about 30 per cent. for each additional *baw*. Should the hull happen to be fashioned out to more than the stipulated width no extra charge is made unless the excess is more than a *pila* or half-baw. Having obtained his *hle-dôn* or rough hull the boat owner floats it down to the *chôk-thama* or boat stitcher and bargains with him for the building up of the boat. Up to a length of seven fathoms the rate is about five rupees a fathom, beyond this length the rate increases until twelve rupees a fathom has to be paid for a ten fathom boat. The timbers generally used as planking are *kanyin* (Dipterocarpus alatus) and *in* (Dipterocarpus tuberculatus) and the stitching is done in the following way. At a distance of an inch from the edge a line of holes is bored in two planks, which are then set edge to edge and the joining is caulked by packing in finely strung out bark of the *bambwe* (Careya arborea). After that a layer two inches wide and half an inch thick of thatching grass, which is an unabsorbent material, is laid along the inner side of the joining and a length of split bamboo along the outer side. The ends of a strip of cane are then threaded from inside through an upper and a lower hole, and passing over the grass and the bamboo are drawn as tight as possible by means of a piece of wood used as a tourniquet. The ends of the cane are then crossed and are similarly threaded back from the outside, and after being tightened as before they are knotted and beaten flat. After the whole length of holes has been treated in this way, three thin strips of bamboo are placed along the outer side of the joining and cane is again threaded through the holes. When the cane is threaded through the first set of two holes it is passed over the two outer strips of bamboo, when it is passed through the second set of two holes it is passed over the middle strip, and so on alternatively. Each time the cane is passed through the holes it is drawn as taut as possible and the ends are knotted and beaten flat. Finally the holes are caulked by hammering in as much of the *bambwe* bark as possible. The boats vary in length from 33 to 48 feet and the ratio of beam to length is from 4½ to 5.

Extinct industries:

Torch making was formerly a large industry in Gwa township but now it is quite extinct. Even as late as 1873

Torch-making. there were 500 families engaged in making torches from *kanyin* and *in*. Silkworm breeding was also at one time a thriving occupation in the same township, in 1845 there were 1,140 acres under mulberry. In 1847 and again in 1850 samples of cocoons were sent to the Agri-Horticultural Society of India and attracted attention because they were larger than the Bengal cocoons. But by 1873 the area under mulberry had dwindled down to only 20 acres, and the number of persons engaged in rearing silk worms to 128; by 1891 the industry had disappeared altogether. It was killed by cheap imported silk. Home-dyeing is now rarely done, ready dyed stuffs being preferred. Even where home-dyeing is practised aniline dyes have, except in the case of a deep yellow colour obtained from the bark of the *Thindan* or *arnotto* (Bixa orellana), displaced native dyes.

Silkworm breeding.

Dyeing.

Factories. A saw-mill was built at Gyiwa halfway between Sandoway and Taungup in 1900, it can turn out three tons of timber a day but owing to the want of capital the outturn has never been as much as this. The absence of means of transporting heavy timber also prevents traders from patronizing the mill to any great extent, and it is chiefly employed in sawing up what timber the owner of the mill can extract. In 1911 a rice-mill was set up on the outskirts of Sandoway by Maung Bwin, it has engines of five nominal horse power and can mill 400 baskets of paddy a day.

Slavery. The state of slavery existed at the time of the annexation and continued until the passing of the Emancipation Act in 1833. It was not uncommon for *thugyis* to sell into slavery persons who could not pay their taxes. After the passing of this Act orders were issued to Civil Courts early in 1834, not to accept suits for recovery of sums due on purchase or mortgage of slaves, and Criminal Courts were also ordered to set free slaves who applied to them, by issuing an order that any one restraining them as slaves was liable to punishment.

Commerce and Trade. The commerce of Sandoway is not extensive nor important. It consists of a small coasting trade with all ports from Calcutta to Rangoon and a smaller land trade with the districts of Bassein and Prome. The commerce with Calcutta and Rangoon is borne in British Indian steamers which call at Kyaukpyu all the year round, and at the mouth of the Sandoway river in the fine weather. The rate for freight on the steamers is fourteen rupees a ton of fifty cubic feet, and on the launches which ply between Kyaukpyu and Sandoway it is twelve rupees a ton. Trade is also carried on with Akyab and Kyaukpyu in country

Water borne.

boats of 15 to 20 tons capacity which are rowed through tidal creeks. The trade to Bassein is taken in *thanbans*, a name given to native built cargo boat of English design. These boats range in size from 18 to 40 tons and sail round Cape Negrais. Latterly railway sleepers have been taken all the way to Chittagong in vessels known as Madras cargo boats. The country boat trading season lasts from November to April.

Inland:

The land route to Prome is by the Taungup Pass which is just practicable for carts in the dry weather. About 50 to 60 carts come through each year but most of the merchandise is carried by coolies. The value of the trade varies from three quarter of a lakh to one and a-half lakhs. The routes to Bassein are foot-tracks over the Kyagaung hills by way of Bawmi on the coast, and over the Yoma by the Pônsogyi and Thitkauk passes. They are chiefly used for the exportation of cattle.

Exports and Imports

Named in the order of importance the chief exports of the district are paddy, timber, salt fish, shrimp ngapi, jaggery, cattle, tobacco, chillies, thatch and cocoanuts. Besides the articles of import trade common to all districts, images of Gautama are imported from Prome and glazed earthenware jars from Bassein.

Sandoway Po[rt]

Sandoway town as a port under the Sea Customs Act includes the roadstead 16 miles away at the mouth of the river. Steamers visited the port up to early in 1908, and in 1907-08 the value of the trade registered was three and a-half lakhs of rupees. After that owing to so-called volcanic eruptions steamers ceased to call and in 1909-10 the value of the same trade, which was then carried in sea-going country boats was just a little over half a lakh. But about two lakhs of the Sandoway trade passed through Kyaukpyu and was registered at that port, so that during the period Sandoway was not used as a port by steamers the trade fell off by one lakh. Early in 1911 steamers began to call again.

CHAPTER VII.

MEANS OF COMMUNICATION.

Routes to district headquarters—Roads; Prome; Sandoway-Taungup; Sandoway-Kinmaw; Sandoway-Ngapali; Andrew Bay; Sandoway-Gwa; Kyeintali Section; Gwa section; Taungup-Kindaunggyi—Waterways—Launch services and Ferries—Posts—Telegraphs—Transport Rates.

Routes t[o] District Head-quarters

Starting from Rangoon the way to reach Sandoway

is to take a passage in a British India coasting steamer, the fares for which are first class forty rupees, second class twenty rupees, and deck seven rupees. These steamers leave Rangoon on Wednesdays and arrive at the island of Zalattôn off the mouth of the Sandoway river, a distance of 466 miles from Rangoon, on the following Thursday afternoon. Here passengers are transhipped to a launch of the Arakan Flotilla which generally lands them the same evening at Sandoway. The fares for the launch journey are five rupees cabin and one rupee deck. But during March and April when stormy winds blow the ground swell at the steamer roadstead is so heavy that it is preferable for timid passengers to go by the monsoon route which is as follows.

During the monsoons a passage must be taken to Kyaukpyu which is 119 miles northward of Zalattôn. The fares for first and second cabin are the same as for Sandoway but the deck fare is nine rupees. The steamer arrives at Kyaukpyu generally on the following Friday morning and the passenger is taken in an Arakan Flotilla launch *viâ* Taungup to Sandoway. The fares are cabin 12½ rupees and deck 3 rupees. The launch runs through creeks and a night has to be spent on board, Sandoway being reached some time on Saturday afternoon or night. Cabin accommodation on these launches is poor and passengers have to make their own arrangements for food; government officers who know the inconvenience of spending a night on board these launches usually arrange beforehand for a Government launch to take them on from Kyaukpyu.

In the fine weather passengers departing from Sandoway leave by launch on Thursday forenoon, and if bound for northern ports catch their steamer at Zalattôn the same afternoon, but those bound for Rangoon have often to stay the night at Singaung, as the steamer does not generally arrive until early on Friday morning. Singaung is a large village at the mouth of the river where there is a furnished bungalow at which a night can be passed comfortably. In the monsoons passengers leave Sandoway on Tuesday morning by a launch which takes them *viâ* Taungup and lands them at Kyaukpyu on Wednesday evening. Here one has to wait for the steamer to Rangoon which arrives on Thursday forenoon, or the steamer to northern ports which arrives on Friday morning.

Owing to the exposed position and the dangerous offing of the Zalattôn roadstead there has been a proposal on foot for some time past to remove the anchorage to

Andrew Bay. The latter is a well sheltered safe harbour with deep water and is 10 miles south-west of Sandoway by road.

The district has always had few roads. In the country to the north of Sandoway they were hardly required as the network of creeks mentioned in the first chapter provides easy means of communication. In the south although there are fewer waterways, the sparseness of population and the fact that several wide rivers have to be crossed did not encourage road making. Previous to 1854 there were only foot tracks in the district; but in this year work was begun in turning the pack bullock track over the Yoma from Taungup to Padaung into a cart road, and since then other roads have been made from time to time. Roads.

The Taungup Pass road was a well-known thoroughfare even in the earliest times. The kings of ancient Prome harried Arakan by this route and it was used by the chief invading Burmese Army in 1783. But it always remained a steep and difficult foot track, impracticable for wheel transport and water was scarce along it. After the Burman conquest of Arakan, the *Ein-she-min* as narrated in Chapter II made a cart road two miles to the south of the old track over the pass. It was known as the *Paya-lan-daw* or Image road and became the chief thoroughfare into Arakan. But it fell into disuse after Maha Bandoola had made the An road between the years 1816 and 1819. In 1826 an officer of the Bengal Army was sent to report on it with a view to marching a portion of the army back to India by it. He was misled into examining the old pass road instead of the Image road and reported that it was impracticable for troops and laden animals. In 1838 it was badly damaged by an earthquake and ceased to be a cart road. During the second Burmese war the only use made of it was to take 150 elephants along it to join the army at Prome. In 1853 Lord Dalhousie planned a grand trunk road from Calcutta to Rangoon, and two Royal Engineer officers, Captain Forlong and Lieutenant Ingram, were told off to construct the section between Taungup and Prome. They selected the alignment of the Image road, and in February 1854 started to improve it with Madras Sappers and Miners. By the end of 1856 they reported that it was in such good order that a pony could trot the whole way. When completed the steepest gradient was 1 in 20, but owing to land slips the gradient in places is now as much as 1 in 10 and 1 in 8; the original width was 18 feet but now in places it is narrower. Prome

Although nothing special has been done since then to keep up the road it remains just practicable for carts in the dry weather. Lately the Telegraph Department, which has an important wire along this road, do petty repairs to it from funds provided by the Public Works Department. In 1902-03 a reconnaisance survey for a railway to India followed the alignment of this road and recommended it for the line the railway should take, in 1908 a detailed survey and estimates for constructing the railway were made. The road is exactly 100 miles in length from Taungup to Padaung, and 110 miles to the river bank opposite Prome; of this length 55 miles lie within the Sandoway District. There are furnished Public Works bungalows at the terminal points of Taungup and Padaung. In between the Telegraph Department has built rest houses of one-bed room and one bath room at the following camping grounds, the distance of which from the previous one is given in brackets:—Kyauktaga (10 from Taungup), Tanyagyi (9), Thalu (10), Yebawgyi (11), Thabye (14), Kywegyi (7), Nyaunggyo (9), Sanpetlet (9), Nyaungchidauk (7). Padaung is 14 miles from the last named place. Also there is a furnished district bungalow at Nyaunggyo in the Prome district which is 2,600 feet above sea level. The only villages along the road are one of fifty to sixty houses at Nyaungchidauk and one of fifteen to twenty houses at Kyauktaga. At Yebawgyi, which is the last camp on the Sandoway side, an outpost of six policemen is maintained from 1st November to the 30th April. There are also telephone stations at Tanyagyi, Yebawgyi, Nyaunggyo and Nyaungchidauk, by means of which Taungup or Prome can be communicated with.

Sandoway-Taungup.

In the year in which the Prome road was begun it was proposed to join Sandoway to it by a cart road. Work was begun from Sandoway and after 6 miles of embankment had been completed the project was dropped, because it was realized that the benefit to be derived from having a road would not be commensurate with the cost of making it. A few years ago small sums were spent from District Cess Funds in improving the old foot track so as to make it fit for carts, but hardly any carts have used it; the road is however much used by foot passengers in the dry weather. Its length is 52 miles.

Sandoway-Kinmaw.

In 1856 the first metalled road in the district was made. It runs for 5 miles from Sandoway down stream along the river of the same name to Kinmaw. It was made shortly after steam communication had been opened with Sandoway,

and it was found that steamers could not go beyond Kinmaw except at spring tides. The same disability exists at present for vessels drawing more than 6 feet. There is a small furnished district bungalow at Kinmaw. The road is maintained from Provincial Funds.

Sando-way-Ngapa

The next road was made in 1872 and is the only other metalled road in the district. It is $4\frac{1}{2}$ miles in length and connects Sandoway with the sea-side village of Ngapali. At the latter place there is a large furnished district bungalow situated on the edge of a long stretch of beach, which is much used by visitors and residents of Sandoway who wish to go to the sea-shore for a change. In 1892 unmetalled extensions were made in two opposite directions. To the south it was taken 2 miles to the village of Lintha of 150 houses, to the north it was carried 6 miles along the coast past four villages to end on the left bank of the Myinchaung. This creek, taking off from the Sandoway river near Kinmaw, circles round and returns to the river at its mouth opposite Singaung; and the making of the latter of the two extensions gave the coast villages shorter and safer water communication with Sandoway. The road and the extensions are maintained from Provincial Funds.

Andre Bay.

In 1908-09 the Lintha extension was continued by District Cess Funds 4 miles further south to Andrew Bay, because there was a proposal that steamers should anchor here instead of at the exposed roadstead. This proposal fell through and the construction of the road was not carried up to the class originally intended. At present it is unmetalled; but the soil most of the way is composed of the right proportion of sand and clay to afford good going in dry weather. It is to be maintained from District Cess Funds. There is a large furnished bungalow on the shore of Andrew Bay which like the bungalow at Ngapali commands a grand sea view.

Sando-way-G

The proposal to make a cart road from Sandoway to township headquarter at Gwa, a distance of $79\frac{1}{2}$ miles, was mooted many years ago. A beginning was made in 1872 when the first 4 miles were bridged and made practicable for cart traffic. From 1899 to 1902 surveys were carried out, the alignment of the whole length of road was settled, and was divided into two sections, the first Sandoway to Kyeintali, a distance of 41 miles, the second of $38\frac{1}{2}$ miles from Kyeintali to Gwa.

Kyeint section

Work on the first section was begun in 1903 and completed by March 1905. It is a raised unmetalled road,

bridged throughout. For the first 32 miles it lies 5 to 7 miles from the sea, in the last 9 miles it passes villages that are practically on the coast. It is an easy road for carts the whole way except, between the 12th and 16th miles where the Mawyôn spur of the Yoma is crossed at a height of about 400 foot, and in the 36th mile where the Pônnyet hill is met with. There are 337 bridges but on account of costliness the two largest streams are not bridged. The first is the Kyaukkyi or Kamyit which is met at mile 22, and has a width of 150 feet in the dry weather and of 250 feet in the monsoon, the second is the Thalu at mile 28, which has a width of 200 feet in the dry weather and of 400 feet in the rains. Owing to the strong currents both streams are difficult to cross in the monsoon, the Public Works Department maintains a ferry at the first and there is a public ferry at the second. Except the 4 miles where the Mawyôn spur is crossed, there are villages or hamlets 2 to 3 miles apart all along the road. Inspection bungalows are maintained at Mènèkwin at the 9th mile, Kyaukkyi 21st, Shaukkôn 32nd and Kyeintali 41st mile.

Gwa section. Work was begun on the second section in 1905 and in 1908 the earthwork was reported completed, but it is not up to the same class as the first section. The roughest portions are from the 8th to the 13th mile where the Kalapyin hills are crossed, and from the 27th to the 33rd mile where the Launggyo and Zigôn hills occur. Except for the stretches just mentioned, there are villages 2 to 3 miles apart also on this section. Bridging has yet to be completed; there are seventy-two culverts and 293 paved causeways, but of the seventy-two minor bridges of up to 25 feet span which were planned for the road, only fifty-four had been completed by 1911. Through traffic is very much impeded for want of five bridges of spans of about 100 feet each, at $5\frac{1}{2}$, 14, 15, 17 and $22\frac{1}{2}$ miles. In addition there are five rivers the cost of bridging which is prohibitive. They are the Alônchaung at the 4th mile, 200 feet wide; the Kyeintali river at the 7th and a half mile, 650 feet wide; the Satthwa river at the 20th mile, 1,300 feet wide; the Kinbôn *chaung* at the 25th mile, 700 feet wide; and the Yahaing river at the 35th mile, 1,327 feet wide. Public ferries are maintained on all these rivers but the crossings are dangerous in the rains, especially those at Kalabyin, Satthwa and Yahaing; and travellers are liable to be delayed for days at each of them. So far the standard type of inspection bungalow has been built only at Kalabyin and Satthwa just beyond the ferry crossings at those places. Temporary rest-houses

have been put up at Launggyo and Yahaing, and at Gwa the old Court House is used as a rest house.

Taungup Kindaunggyi.

One other road, which though not at present a cart road, may be mentioned because it is much used and should be made into a cart road. It runs from Taungup 15 miles northward to Kindaunggyi. Although there is water communication between these two places the distance is nearly 40 miles and tides cause delays. The Taungup river has to be crossed near the village of the same name, but after that there are no large streams. A few years ago some of the more troublesome of these streams were bridged by the District Cess Funds.

Waterways.

In describing the rivers it was stated that largest sized boats and launches can travel from Sandoway northward to Kindaunggyi, a distance of 100 miles, without having to put to sea. But in order to reach villages beyond the latter point, these vessels have to go round by an arm of the sea known as the Kaleindaung river, the journey however can be done in safety except when the monsoon is at its roughest. Smaller sized boats can always go by inland waters to Mawywa 60 miles north of Kindaunggyi. It is only when the voyage has to be continued still further north to the Ma-i river, that these boats have also to go out into the Kaleindaung. But by waiting for a spell of calm weather this journey can even be done in the monsoons. It may thus be said that there is water communication all the year round north of Sandoway. On these waterways there are furnished district bungalows at Shwehle on the Thade river, at Wetcheit on the Taungup, at Kindaunggyi on the Tanlwè, at Mawywa on the Lamu, and at Ma-i. To the south of Sandoway the streams do not intercommunicate, nor are there any sheltering islands behind which vessels can slip from one estuary to another; in consequence communication by water is entirely interrupted during the rains.

Launch services and ferries.

The Arakan Flotilla Company run three weekly launch services of which two continue all the year round. Of the latter the first connects Sandoway with the weekly British India steamer and also runs to Taungup, the other is a direct service between Kyaukpyu and Sandoway. The third is carried on only from 1st November to 30th April, and runs by sea between Sandoway and Gwa *viâ* Kyeintali. A Government launch built to ply in inland waters is stationed in the district for the use of officers.

Besides the six public ferries on the Sandoway-Gwa road there are three public ferries across the Sandoway river

and one each across the Thade, Taungup, Tanlwè, Kadogale, and Gwa rivers.

sts. During the continuance of the first Burmese war a regular *dâk* was run once a week between Sandoway and Prome *viâ* the Alegyaw Pass, the journey being done in four days. After the annexation a postal service of country row-boats was maintained twice a week with Akyab by means of stages at Ramree and Kyaukpyu, passengers were also carried in these boats. The rate for letters was one anna a stage, and the postage as far as Calcutta was twelve annas. For parcels the rates per stage were three annas a seer (two lbs.) up to 5 seers, one and a half annas for every seer over 5 and up to ten seers, and one anna for each seer over 10 seers. Passengers paid Re. 1 a stage and Rs. 2 for the through journey to Akyab. About 1850 the boats ceased to carry passengers and the route was shortened by going direct to Kyaukpyu without calling at Ramree. The mails then took six days in fine weather and nine days in the monsoons to reach Akyab. During the second Burmese war the land line to Prome *viâ* the Alegyaw Pass was used again; and a *dâk* was also run to Bassein *viâ* Gwa in six days. Both these lines were given up after the war. In 1872 an experiment was tried to take the Indian mails to Rangoon by the Taungup Pass, but it was soon given up as being expensive and slow. From 1865 to 1905 the District Cess Fund spent about Rs. 1,500 a year in maintaining district postal lines, but in the latter year the Postal Department took over all lines. At the present time all launches carry mails, but during the rains when launches do not run to Gwa, the mails are taken once a week by runners. There are post offices at Sandoway, Taungup, Gwa and Kyeintali, the last for letters only.

Tele-graphs. The first telegraph line in the district was put up in 1861, in order to connect Calcutta with Rangoon. The wires were run from Prome along the Image road to Taungup, from the latter place they were taken south-west to Padin island, and then across the mouth of the Kaleindaung river by cable to Ramree island. In 1864 the cable was abandoned owing to the constant damage done to it in rough weather, and a land line was taken from Taungup north to Ma-i and then on to Akyab. This is the main land wire from India to Burma and Taungup is an important observation station on it. A few years later a line branched off and crossed by cable from off the mouth of the Tanlwè river to Ramree island, in order to connect Kyaukpyu with the main line. But it

was only as late as 1905 that Sandoway was given telegraphic communication by making a line from Taungup to Sandoway. The Telegraph Department maintains telephone stations at Taungup, Sabyin and Ma-i, which are roughly 20 miles apart; by means of them communication between Sandoway and the extreme north of the district can be arranged.

Coolies as porters are paid eight annas for a march of 10 miles, and one anna a mile if taken beyond that distance. Carts are paid two annas a mile, and in addition one anna a mile if they return empty. During the rains the rates for coolies and carts are doubled. The hire of travelling boats not exceeding five fathoms in length is eight annas a day, and four annas for each extra fathom in length. Rowers and steersmen are paid eight annas and in the rains twelve annas a day. Transport ra[tes]

CHAPTER VIII.

FAMINE AND SCARCITY.

In the two reports dealing with settlement operations in the district it is recorded that the cost of food per head of population for one year may be represented by a provision of 18·64 baskets of paddy. The average of the annual crop cuttings gives the outturn of an acre as thirty-two baskets. Therefore if rice alone is taken into consideration an acre can feed two persons. When we first knew the district there were ten persons to every 3 acres of paddy land and up to 1853 the proportion was 2·7 persons to an acre. At this rate the district could not feed its population, and it is not surprising to learn from the old records that the people were often put to great straits to obtain rice and Government had to send supplies from Ramree and Akyab. In the decade 1853 to 1863 the sparsely cultivated *Taungkwin* mentioned in a previous chapter was made over to Bassein, and many families that had immigrated from Ava territories returned to their old homes after the annexation of Lower Burma. Owing to these causes the number of persons to an acre dropped to 1·3 and the district began to export paddy for the first time. In the next decade the comparatively sterile *Taungkwin* was given back, and the number of persons to an acre rose to 1·5. This proportion has been maintained up to now, for so far extension of cultivation is just keeping pace with the growth of population. The district has there-

fore been self-supporting for many years and ordinarily is secure against famine, though sometimes local scarcity is brought about by unseasonable rain combined with deficiencies in means of communication. Within the last twenty-five years there have been only two bad seasons, once in 1888 and the other in 1902, when the outturn of paddy was only three-fourths of normal. It will however be seen that the surplus available for export is small and it often happens that, tempted by high prices at harvest, cultivators dispose of too much of their grain with the result that a certain amount of scarcity is felt in the following rains. This generally happens in the Gwa township which is almost inaccessible during the monsoons.

CHAPTER IX.

GENERAL ADMINISTRATION.

In Burmese times—District Officer—Formation of sub-charges—Staff at Headquarters—*Thugyis*—Village headmen—Judicial: Civil Courts; Criminal Courts; Litigation; Criminal Justice—Police: Military Police; Civil Police; Strength; Stations; Rural Police—Crime—Public Works Department.—Jail: Industries; Buildings—Local Funds.

Bur se es.

Under Burmese rule Sandoway was governed by a *wun* who was appointed by the king from among the higher officials at the capital. He had full civil, judicial, military and fiscal powers and was directly responsible to the king. His assistants were a *Sayadawgyi* or secretary, a *Sitke* or military commander who was also a senior magistrate, and a *Kôn-min* who sat at Sandoway to hear and decide more important law suits. Subordinate governors were a *Myothugyi* at Sandoway and a *Taikôk* at Gwa. Under the latter were *thugyis* who were in charge of 32 clearly defined tracts called *taiks*. These *taiks* or circles were so well known, that to this day if a person is asked where he was born, he mentions the name of a circle and not the name of a village. The *thugyis* had civil and criminal powers to settle the every-day disputes arising in villages, and were answerable for the preservation of peace; but their most important duty was to apportion revenue demands among villages and to have them collected. The offices of *myothugyi*, *taik-ók*, and *thugyi* were not strictly hereditary, these appointments being subject to confirmation by the king; but if the heir was not allowed to succeed, the

appointment was always given to some member of the family of the late official. In addition to the above permanent and recognised officers, there were *ywagaungs*, who were appointed by *thugyis* to the charge of one or more villages, according to the amount of assistance a *thugyi* fancied he required. They assisted in keeping order, and collected taxes which they handed over to the *thugyi*, who allowed them a small sum as remuneration. *Thugyis* were required to keep an agent at headquarters, and the *wun* had to keep one at the capital.

None of the officials received any salary. They were exempted from paying taxes, and were allowed to retain fees for law suits, also fines inflicted by them in criminal cases. The three officers who formed the staff of the *wun* were remunerated by him, according to his pleasure out of the revenues paid in. *Thugyis* and sub-governors were also allowed to retain 10 per cent of taxes collected in their jurisdictions. But the chief source of income of all officers was what they made out of revenue collections; each in turn remitted to the higher authority as small a sum as he could without being called to account.

Early in the first Burmese War the *wun* killed the *Myothugyi* with whom he had had a long standing feud and fled across the Yoma. Most of the *thugyis* also ran away; but nearly all returned after it had been proclaimed that those *thugyis* who undertook to supply and maintain a pack bullock per house for the use of the troops would be upheld in their posts.

District Officer.

After the annexation of 1825 the administration of the newly acquired territories was entrusted to an officer who was styled the Special Commissioner. Arakan was placed under two of his assistants who were called Local Commissioners and were stationed at Akyab. Two districts, Akyab and Ramree were formed, and officers called Assistants to the Commissioners were put in charge of them. Sandoway at first formed part of Ramree but in 1827 it was made into a separate district. In 1829 Arakan was separated from Tenasserim and was put under the Commissioner of Chittagong; at the same time one of the Local Commissioners was abolished, and the name of the remaining one was changed to Superintendent of Arakan. In consequence officers in charge of districts were called Assistant Superintendents. Four years later, when assistants were given to the district officer of Akyab, the distinguishing term Senior Assistant Superintendent was applied to officers in charge of districts. The connection with Chittagong lasted only

five years but it is marked by a letter from the Commissioner enjoining district officers to wean the inhabitants of Arakan into becoming Bengalis like the Mughs of Coxe's Bazaar and Ramoo in Chittagong.

In 1834 Arakan became a commissionership of the province of Bengal and the original nomenclature was reverted to; district officers were therefore called Senior Assistant Commissioners. Ten years later in 1844 Assistant Commissioners who were not in charge of districts were classed as seniors and juniors, and the name of the district officer was changed to Principal Assistant Commissioner. Finally in 1862 the province of British Burma was formed, and the number and classes of Assistant Commissioners were greatly increased, it then became necessary to invent a new name for the officer in charge of a district, and he was given the present title of Deputy Commissioner. Throughout all these changes of names the district officer was known to the people as the *Myo-wun*; the term *A-ye-baing* came into use only when the title of Deputy Commissioner was introduced. Formerly when an officer was first posted to the charge of a district he was installed with some formality, for until 1858, the year in which the Crown took over the direct administration of India, he had in open court to take the oath of allegiance to the Sovereign, and had also to make affidavit that he would try all cases conscientiously, and would act in all matters with impartiality and integrity.

Formation of Sub-charges.

Until 1861 the district officer was the only magistrate and judge and the sole executive officer, in this year he was given a general assistant. In 1863 the services of the assistant were restricted to judicial matters, and instead the district was divided into the Northern and Southern townships with headquarters at Padin and Kyaukkyi respectively. The officers put in charge were at first styled Extra Assistant Commissioners, but a few years later they were called Myoôks. In 1864 the Myoôk at Padin was moved to Taungup and the one at Kyaukkyi to Kyeintali. In 1872 the Southern township was divided into two, the northern portion was named the Central and had its headquarters at Sandoway, the other portion was named the Southern and its headquarters continued to be at Kyeintali, but in 1874 they were moved to Gwa. These three townships are now known as Taungup, Sandoway and Gwa. Sandoway is the heaviest charge and in order to give relief to the Township Officer, a Myoôk was posted in 1902 to try all civil suits belonging to this township. There are no subdivisions.

A *Myothugyi* was appointed when the district was formed but he had no territorial jurisdiction, nor had he any civil or criminal powers. He resided at headquarters and was the revenue assistant of the district officer. His pay was fifty rupees a month, afterwards it was raised to eighty; when township officers were appointed he was graded with them, and in 1871 he was called *Akunwun*. Under this name he remains to the present day as the revenue assistant of the Deputy Commissioner. The only other officer whose appointment dates from the formation of the district is the Civil Surgeon, but for many years he was simply a medical attendant residing at headquarters. In 1864 the Police Act of 1861 came into force and a District Superintendent relieved the Deputy Commissioner of the executive charge of the police. Nearly twenty years later the Civil Surgeon took over charge of the Jail, and about five years later he relieved the Deputy Commissioner of the executive charge of the Treasury. The Civil Surgeon continued to be Treasury Officer until 1902, and then the Myoôk who was posted to be additional Township Judge of Sandoway was also appointed to be Treasury Officer. Afterwards as the administration of the province developed, the following officers were posted to the district. A Superintendent of Land Records was appointed in 1893. A Superintendent of Excise under the new scheme was appointed in 1896, and in 1912 was transferred to Kyaukpyu on its amalgamation with Sandoway for Excise purposes. A Deputy Inspector of Schools was posted in 1903, an Executive Engineer in 1907, and a Subdivisional Forest Officer in 1908. The Deputy Commissioner is *ex-officio* Collector of Customs and is in charge of the Port which includes the steamer anchorage at the mouth of the river. He is also a Marriage Registrar and a Commissioner under the Income-tax Act.

Staff at headquarters.

Immediately after the annexation the raising of revenue and the appointment of tax collectors were taken in hand. The officers entrusted with the task came from Bengal, and being misled by the pretensions of the *thugyis* who posed as being owners of their *taiks*, these officers came to look upon the *taiks* as estates, and upon the *thugyis* as *zemindars* in analogy with the system existing in Bengal. They therefore put the *taiks* up for sale and called for tenders from those who wished to be *thugyis*. The person tendering had to state the sum he would raise yearly and the share he would pay to Government, he had also to mention the quantity of salt he was prepared to manufacture and deliver

Thugyis.

to the Government *golahs* or salt godowns at the price of four annas a maund. Appointments as *thugyis* were given to the highest bidders, and it was settled that the contract thus made should remain in force for three years. In this way thirty *thugyis* were appointed in 1826. But no *thugyi* was able to pay in anything like the sum of money nor the quantity of salt he had contracted to pay, and some in despair of being able to fulfil their obligations absconded with what they had collected. Early in 1828 all the contracts were cancelled, a new system of raising revenue was introduced and most of the old *thugyis* or their heirs were reinstated in the thirty-two *taiks*. Afterwards two hill circles were amalgamated which left thirty-one *taiks* in the district. The functions and powers pertaining to the office in Burmese times were revived, except that *thugyis* were not allowed to dispose of petty criminal and civil cases, and the appointment was no longer considered hereditary. Yet at first the office was practically an hereditary one, for if a *thugyi* did good service he was generally succeeded by his son or a near relation. Afterwards when *thugyis* were required to be persons of certain qualifications the appointment was conferred on the most suitable candidate, but preference was given to those who belonged to a *thugyi* family. In course of time owing to the introduction of more scientific revenue laws, higher qualifications were required of *thugyis* and few cadets of *thugyi* families were able to become qualified for appointment. Consequently most of the *thugyis* came to be outsiders. Also in course of time the revenue duties of the *thugyis* became so heavy that they were unable to devote themselves to village administration and to perform their police duties efficiently. In the meanwhile the old *ywagaungs* were coming to the front, and a combination of these circumstances brought about the downfall of the old *thugyi* system.

Ywagaungs had been retained from the very first, but instead of being appointed by *thugyis* they were elected by villagers subject to the veto of the district officer. At first little store was set by these officials for in 1862 there were only 66 in the whole district. But when under the circumstances already explained, *thugyiships* passed more and more into the hands of strangers and the holders of these appointments became absorbed in their revenue duties, more *ywagaungs* were appointed in order to perform village police duties. In 1865 their position was regularised by their being declared to be rural police officers or *kyedangyis* and by the year 1872 there were 162 of these officers. About

the same time the greater responsibility placed on them was recognised and they came to be called *ywathugyis*; while *thugyis* proper who had by now became mere revenue collectors and nothing more, were called *taikthugyis*. Thus although the old term of *thugyi* was still in use, the important village administrative side of the office had been lost sight of. The *ywathugyi* was merely a rural police officer and the *taikthugyi* was only a revenue collector; but the influential leader and local administrator of the village community had disappeared. In 1889 it became the policy of Government to revive the old system and the Lower Burma Village Act was passed. Under it the *ywathugyi* was called village headman, and while retaining his police powers he was given all the powers and functions, except the collecting of revenue, which had been attached to the office of *thugyi* in Burmese times. *Taikthugyis* were appointed to be headmen for the village in which they resided. The district was divided into 228 village tracts, but afterwards seven were amalgamated with other tracts and now there are 221. Of these 221 headmen, nine have been empowered to try petty civil suits, and five have special criminal powers. The question of remunerating village headmen was next considered. At first it was proposed to give each Rs. 15 to Rs. 20 a month, partly by remitting land revenue and partly by cash payments. But this scheme meant the acquiring of land for those headmen who owned little or no land, and the cost of acquisition was prohibitive. It was then determined to let them collect revenue and receive commission on the collections. In furtherance of this scheme whenever a vacancy occurred among the *taikthugyis* village headmen were directed to collect the revenue, and surveyors were appointed to do the other work required of the *taikthugyi*. The scheme was started in 1890 when there were twenty-one *taikthugyis* in charge of the thirty-one circles in the district. In 1911 there were only two *taikthugyis* left.

Judicial: Civil Courts.

Although until 1861 the District Officer was the only Civil Judge he had always been relieved from trying petty suits. At first these suits were referred to *punchaits* or benches of five elders; but shortly after 1835 this expedient was given up as it was found that the *punchaits* did not decide according to the evidence produced before them, but were led away by superstitious notions and by their own ideas of justice. After that petty suits were referred to *thugyis* for investigation and were returned to the District Officer for decision. In 1861 the assistant who was posted to

the district was empowered to try suits up to five thousand rupees in value. Two years later Act I of 1863 constituted regular grades of courts for the province. By this Act the lately appointed Township Officers were to try suits up to five hundred rupees in value, the assistant at headquarters suits up to three thousand in value, and the Deputy Commissioner suits above the last named value. Later when Courts with powers to try suits up to three thousand rupees in value came to be called Subdivisional Courts, the one at Sandoway ceased to exist because there was no Subdivisional Officer in the district. At present the civil courts are the Township Courts of Sandoway, Taungup and Gwa, and the District Court. The Township Court of Sandoway is also a Court of Small Causes for suits up to fifty rupees in value occurring in Sandoway town.

nal s. The Sub-Judge appointed in 1861 was also an assistant magistrate and thus the district for the first time had two magistrates' courts. In the same year selected *thugyis* were appointed Honorary Deputy Magistrates and had the same powers as the Assistant Magistrate. By the Act quoted above Township Officers became Magistrates and Honorary Deputy Magistrates were done away with, but instead Benches of Honorary Magistrates came into being. At present the Magistrates' Courts in the District are the three Township Magistrates; a Headquarter Magistrate (the Treasury Officer) and an Additional Magistrate (the *Akunwun*) at Sandoway; the District Magistrate; and Benches of Honorary Magistrates at Taungup and Sandoway.

The district belongs to the Arakan Sessions Division, of which the Commissioner is the Sessions Judge; he comes twice a year to Sandoway to try cases.

Persian used to be the language of the courts until 1844. The proceedings were recorded by a writer who was called an *omlah*. In this year Burmese took the place of Persian. When the District Officer was the only Judge the number of suits instituted each year varied but little, there were 128 in 1848 and 123 in 1861. The average value of a suit was about fifty rupees. When Township Courts were established in 1863 the number of suits was 221, and ten years later it was 323; for the ten years ending 1910 the average number each year was 607; the highest number reached being 728 in 1909. The average value of the suits was thirty-two rupees in 1863, and remained between thirty and forty rupees up to the beginning of this century. From then until 1905 the value was between forty and fifty, and during the next five years the average value was fifty seven rupees.

Civil Justice was managed better than Criminal Justice in Burmese times, hence it is that the history of the district under British rule is more truly reflected by statistics relating to the latter than those relating to the former. In the first few years the country was in a very disturbed state and only cases which could not be overlooked were dealt with. In consequence up to 1830 only about 70 criminal cases a year were disposed of. But as the district quieted down people learnt that redress was open to all, for the records show a large increase in the number of petty cases. This brought the average number disposed of yearly during the period of eight years ending in 1838, up to 125. Then began the troublous times of Kings Tharrawaddy and Pagan Min, during which the population of the district was greatly increased by immigration from beyond the Yoma. In keeping with this increase the average number of cases disposed of yearly for the period ending 1843 was 165. After this year the rate of immigration was accelerated and those who came were of a poorer class; the result was scarcity and crime, and is the reason given in the records for the number of cases rising year by year to nearly 300 in 1853 Between this year and 1864 there was a large loss of population due to the circumstances explained in Chapters II and III and the yearly average fell to about 200. During the period 1865 to 1870 the conditions now ruling set in, and from the latter year, when the number of cases disposed of was about 300, the number increased steadily by about 100 in each decade, to about 600 in 1900. After that the increase was more rapid owing to the introduction of special laws, the number in 1904 was about 800 and it increased by 100 each year up to about 1,100 in 1907. Since then it has fallen steadily, and in 1910 it was 850. Formerly the district magistrate personally saw to the carrying out of the sentences imposed by him, for the office of executioner appeared for many years on the list of the District Magistrate's establishment. Criminal Justice.

Two corps were raised in 1826 for the purpose of performing police duties in Arakan. One was called the Arakan Provincial Battalion and was recruited in Chittagong, the other known as the Mugh Levy was recruited from "Mughs". This name was originally given to Arakanese who had settled in Chittagong, but after the annexation it was extended to all inhabitants of Arakan who were not natives of India. Both corps were officered from the army and were at first under the military authorities. The first carried out civil police duties, the other had a stronger Police.

complement of officers and was employed as military police. The headquarters of both corps was at Akyab and detachments were posted to Sandoway District. In addition up to 1852 some Indian regulars had to be kept here owing to the frequent incursions from beyond the Yoma.

On the withdrawal of the bulk of the troops from Arakan in 1829 the Mugh Levy was increased in strength, and handed over to the civil authorities, but it continued to be officered from the army. Quentin Battye of the Guides, who was afterwards killed at the seige of Delhi served at one time with the detachment at Sandoway. The strength maintained at the headquarters of the district varied from 100 to 150. This detachment and the regulars occupied cantonments on the opposite bank of the river, with which communication was kept up by means of a Government ferry and afterwards by a bridge. The rest of the corps serving in the district held defensible posts in the country north of Sandoway. The number and position of these posts varied according to the state of the district; but the posts that had always to be maintained were Kyauktaga 10 miles from Taungup along the Prome road, and Kadoseik on the Tanlwè river. In 1845 the name of the corps was changed to the Arakan Local Battalion. When the second Burmese war began in 1852, the headquarters was transferred to Sandoway and the greater portion of the corps was kept concentrated there for the reasons already explained in Chapter II. In 1853 the battalion was transferred to Rangoon and served in Lower Burma until it was disbanded in 1862 on the quieting down of the new province. Sandoway continued to be without Military Police from 1853 to 1888. In the latter year the disturbances following the annexation of Upper Burma, led to the raising of the present force of Military Police and a detachment was sent to this district. The strength was at first seventy, in 1909 the increase of work at headquarters made it necessary to increase the number there from thirty to forty-two, and in 1911 the strength was further increased and now there are 110 Military Police serving in the district. Details of the four posts held are given in Volume B of the District Gazetteer.

In 1829 the Arakan Provincial Battalion was disbanded and replaced by policemen enlisted by the district officer. This force was at first composed wholly of natives of India from Chittagong and Bengal, many being sepoys of the lately disbanded battalion. The men were called burkandazes and were paid five and a half rupees a month, their native officers were styled Doragahs, Subadars,

Jemadars and Duffadars, and were paid fifty, twenty, ten and eight rupees a month, respectively. They were armed with muskets and bayonets and appear to have been uniformed according to the fancy of the district officer, for there is a bill dated 1846 for tight fitting Light Dragoon jackets and trousers supplied for the police. Afterwards "Mughs" were received into the force, but district officers were cautioned by the Commissioner of Chittagong to see that the senior officers were not entirely Mughs, who, it was pointed out, are barbarously oppressive and wantonly cruel when placed in authority and left to themselves. It took a force thus recruited, paid, and administered many years to gain a good name. In 1844 Captain Phayre, the district officer, stated that it required constant attention to keep the police from petty acts of annoyance and oppression. And in 1855 the Lieutenant-Governor of Bengal noted that the police of Arakan were even more than usually inefficient. In the year just mentioned the pay of the men had to be raised to seven rupees, as the police in the newly formed districts of Bassein and Prome were paid eight rupees a month, and native of India policemen from Sandoway used to desert in squads and enlist in those districts. There is a complaint on record that a party of native of India police sent from here to identify and arrest some deserters in Prome, itself deserted and joined the Prome police. It is from this time that natives of India ceased to form the bulk of the district force, in 1872 there were 70 out of 200, in 1888 there were only 46 out of a total of 184, and when Military Police were sent to the district natives of India were no longer received into the civil police. In January 1864 when the Police Act (V of 1861) was extended to Arakan the former Indian military titles were altered to Inspector, Head Constable, Sergeant and Constable.

Strength.

Until 1852 the strength of the force averaged 300; most of the men were stationed in posts north of Sandoway, which was the portion of the district most open to raids from Burma. At one time there were as many as nine police stations and five outposts in this part of the district. South of Sandoway, it was necessary to keep police only at Kyeintali and Gwa. In 1853 the strength was reduced to 140 and again to 70 in 1855; but in the seventies it was raised to about 200 for some reason that cannot be traced. After the rebellion of 1890 the strength was reduced to 106 all told, but was raised to 141 in 1896; and it remained at this number until the re-organization in 1907 when it was raised to 198 as is detailed

in Volume B of the District Gazetteer. In addition to the details given there an Inspector to act as Court prosecuting officer, and a Deputy Superintendent belong to the sanctioned strength; but no Deputy Superintendent has been posted to the district as yet. There is one policeman to every 500 inhabitants.

ons. There are nine stations, three in each township and an outpost which is maintained only in the open season at Yebawgyi on the Prome road. In 1902 the station at Sandoway, which is a defensible blockhouse, and permanent quarters for the men were put up at a cost of Rs. 65,395. At six other stations there are smaller blockhouses, the last of which was built in 1907. But at Mawywa and Satthwa the stations are still old mat and thatch buildings in the style of Burmese *zayats* or rest-houses. At all stations except at headquarters the men are housed in cottages of mat and thatch, which are erected in lines near the station. But this style of cottage is ill-suited to withstand the heavy rainfall of Sandoway.

.l In Burmese times *thugyis* and *ywagaungs* were the only e. police officers, and villagers had to act as policemen whenever the former called upon them to do so. After the annexation these officers were required to arrest offenders and to help the regular police in the investigation of crime. But in course of time as has been explained, *thugyis* were unable to carry out police duties efficiently and *ywagaungs* were hardly recognised. In May 1865 or one year after the Police Act had been extended to Arakan, rules were framed to place these rural police on a proper footing. The better class of *ywagaungs* were appointed *yazawutgaungs* on a salary of Rs. 10 a month, and were put in charge of circles. Their duties, which they conducted under the supervision of the District Superintendent, were the same as those now exercised by village headmen. The other *ywagaungs* were appointed *kyedangyis*, and had powers similar to those laid down for ten-house *gaungs* in the Village Act, and which they exercised in a village tract in subordination to *yazawutgaungs*. These rural policemen were not to collect revenue, but the *kyedangyis* being also *ywagaungs* were required to assist *thugyis* in the collection of revenue. The *kyedangyis* of the larger village tracts were given a salary of Rs. 5 a month, those in smaller tracts were exempted from paying capitation-tax if there were ten or more houses under their charge. In 1889 or the year before the Village Act was extended to the district there were 17 *yazawutgaungs* and 19 paid *kyedangyis*. On the introduction of the Village Act

the names *yazawutgaung* and *kyedangyi* were abolished; the powers of the former were conferred on village headmen and the powers of the latter on ten-house *gaungs*.

The more serious crimes, dacoity, robbery and those affecting life have always been rare, except during the disturbed periods referred to. The records down to 1906, when they show cases at all under murders, rarely show more than one a year. Since then four or five are committed each year, but they are generally those in which death has been caused in a drunken quarrel or in sudden fight. Dacoity is not an indigenous crime. When it was committed previous to 1853 it was always noted that it was the work of trans-border men, and the few cases committed since then are also believed to be the work of men belonging to other districts. In the four years ending 1910 only one dacoity was committed. Between 1826 and 1853 robberies were of rarer occurrence than dacoities, since then the number committed each year is about the same as in the case of offences affecting life. Nearly all are small highway robberies. Cattle theft is also rare, although the district is well stocked with cattle and there is a large demand for them in the neighbouring district of Bassein. The configuration of the country makes it a difficult matter for a thief to get away with a stolen animal. **Crime.**

As elsewhere the most common forms of crime are thefts including house breaking, and quarrels in which the consequences range from mere insult to the causing of grievous hurt. During the six years ending 1910 there were on the average 1,214 offences reported each year, but only 950 of these need be considered for the rest were infringements of bye-laws and rules. Of the 950 offences reported, 545 belong to the two classes mentioned above, and separating the two classes there were 330 thefts and 215 of the other kind. The proportion which these figures bear to each other and to the total volume of crime is the same as in the rest of the province. Cases of house-breaking rise and fall with cases of theft, roughly speaking one-fifth of all thefts are committed by means of burglary, whereas in the rest of the province the proportion is one-sixth. The figures for the three years ending 1910 show that thefts are steadily decreasing in number, and consequently the total volume of crime is also decreasing. In the other main class, about the same number of offences has been committed during each of the four years ending 1910; and nearly one-third in each year result in serious hurt, which is also the case in the rest of the province. But the number of cases of grievous hurt is

on the increase. The next most common offences are those against the Opium and Excise laws. There was an average of 144 reported each year during the six years ending 1910, 92 being under the former, and 52 under the latter laws. But whilst offences under the Excise laws remain stationary those under the Opium laws are decreasing.

blic orks part- nt.

In the Public Works Department Sandoway belongs to the Maritime Circle, the headquarters of which is at Rangoon. Formerly the district was one of the subdivisions forming the charge of the Executive Engineer of Akyab, but in 1907 Sandoway became the headquarters of an Executive Engineer who was posted to the charge of a new division, formed out of the districts of Kyaukpyu and Sandoway. The district is now a subdivision of this division; but for the time being owing to the construction of the Kyeintali-Gwa road, there is a temporary extra subdivision for that construction. Besides the two subdivisional officers, there are one Upper Subordinate and two Lower Subordinates serving in the district, a third was added in 1911 when District Cess Fund works were made over to the Executive Engineer. There are no works of any importance besides the usual public building and the roads mentioned in Chapter VII. There used to be a bridge across the Sandoway river opposite the Court-house, which was built by Captain Fytche in 1851 when he was in charge of the district; now, the only signs of it are a few piles which can be seen at low water. The oldest public building is the district Court-house, which was built in 1892 at a cost of Rs. 70,000 after the old Court-house had been burnt down in the rebellion of 1890. As a contrast it may be mentioned that in 1827-28 a combined Court-house, treasury and guard-room was put up at a cost of Rs. 6,265. The usual quarters for officials were built between 1901 and 1904.

Until about 1880 the Deputy Commissioner was in charge of the jail, and the guard formed a section of the district police, now the Civil Surgeon is in charge and the guard is a separate force. Before the Andamans were established in 1861 Sandoway, in common with other headquarter stations of Arakan, was a place to which life convicts from India were transported, and it had such a good name for healthiness that the old, infirm, and sick of other stations were sent here, as if to a sanitarium. In 1855 there were 87 of these invalids, and a guide for the blind used to be a regular member of the jail establishment. Life convicts sometimes numbered as many as 200 but they were always kept apart from local prisoners both in quarters and at labour. In 1864

all life convicts were sent to the Andamans, but to this day two ticket-of-leave men of old times come regularly every month to the district office to receive their subsistence allowance of two annas a day. The convicts until 1845 were allowed one anna a day for food, they were arranged in messes and two men from each used to go daily to the bazaar to buy supplies. In this year the ration system was introduced; a non-labouring convict was allowed fifteen and three-fourths chittacks (eight chittacks equal one lb.) costing seven pie, and a labouring convict seventeen and three-eighths chittacks costing one anna. Burman prisoners used to be allowed a quarter chittack of tobacco a day.

Industries. The making and repairing of station roads were the chief forms of labour in vogue up to 1864, for the records make little mention of jail industries. At present paddy cultivation, mat and rope making, carpentry, and brick making are the chief occupations of the prisoners.

Buildings. The first jail, put up about 1830, was a mat building surrounded by a stockade and stood on the site of the present Municipal Bazaar. This building was so insecure that at night it was necessary to chain all prisoners together in order to prevent escapes. In 1877 a second class jail of brick with thatch roof and wooden floor was built on the site where the present jail stands. The buildings now in existence which are classed as a 4th class district jail were put up in 1892. There is accommodation for 84 prisoners, including six females. Only prisoners of the habitual class who are sentenced up to two years, and non-habituals sentenced up to five years are kept here. During the five years ending 1909 there was a yearly average of 77 in jail, the average being lowered by a drop from 83 in 1908 to 70 in 1909. For the sake of comparison the numbers for a few previous years are given; in 1845 there were 30; in 1851, 34; in 1873, 37; in 1882, 19; and in 1892, 38. Jail statistics are given in Table XXI of Volume B of the District Gazetteer.

Local Funds. A District Fund was started as far back as at least 1850, and in 1862-63 the income was Rs. 1,500. The sources of income were cattle pound fees, bazaar rents, sales of leases of ferries, and receipts on account of convict labour. The last item was withdrawn when the Deputy Commissioner ceased to be in executive charge of the jail. In 1864-65 a cess of 5 per cent. on land and fishery taxes was added, and thereafter the fund was called the District Cess Fund. Its income was Rs. 4,620 in 1867-68, and Rs. 5,800 in 1877-78. In 1880 the rate of cess was raised to 10 per cent., and the income rose to about Rs. 7,200. Since then the rate of

increase has been small. The district has no large bazaars and the cess has always been the chief source of income, but because the rate of extension of cultivation is small the amount received from cess increases very gradually. For instance in 1893-94 the income was Rs. 8,045 of which Rs. 7,424 were due to cess, ten years later it was Rs. 12,281 of which Rs. 11,586 were derived from cess, and in 1909-10 out of a total income of Rs. 15,236 the receipts from cess amounted to Rs. 13,095. The fund also receives a fixed contribution of Rs. 1,940 a year from Provincial revenues to be expended on medical purposes.

The fund kept up till lately hospitals at Taungup and Gwa. It maintains a staff of vaccinators, a veterinary assistant, and caretakers for bungalows built for the use of travellers; it also contributes to the cost of education in the district, and to the up-keep of the municipal hospital at headquarters. What is left after providing for these establishments is spent on repairs to existing roads, bridges, landing stages and rest houses. Formerly the fund received large contributions every year from provincial revenues to be spent in carrying out new works of public utility, but since 1908 these contributions have been withdrawn. This loss of income crippled the fund to such an extent that it became unable to meet all its liabilities and in 1911 the Taungup hospital had to be closed. The public works portion of the District Cess Fund expenditure was made over to the Executive Engineer in 1911. Belonging to, or maintained by the fund are 13 ferries, a bazaar at Taungup, 29 cattle pounds, 10 district bungalows, one hospital, three landing stages, two permanent bridges of over 100 feet water-way and 59 miles of unmetalled roads.

CHAPTER X.

REVENUE ADMINISTRATION.

In Burmese times—First year of British rule—House tax—Plough tax and Capitation tax—Introduction of land tax—District rate—*Kwins*—*Kwin* rates—Settlement of 1865-66—Settlement of 1897-98—Settlement of 1905-05—Summary of history of rates—Growth of land revenue—Agency for assessing and collecting—Land Records Department—Capitation tax—Fisheries—Miscellaneous land revenue—Salt—Stamps. Excise: Liquor; Opium—Income tax—Registration of documents—Total revenue of district.

In Burmese times there were no annual assessments at fixed rates, and no one had any idea of what amount he

might be called upon to pay during the year. The only fixed taxation was on account of the payment which had to be made annually to the *Myosa*, who was a court official or a member of the royal family to whom the king had assigned a sum to be paid by the province of Sandoway. But besides this sum there were a number of other demands. First of all there was the yearly contribution to the royal treasury, the amount of which depended on the whims or the needs of the king, then there were various requisitions made from time to time. For instance in 1798 the king demanded 333⅓ tickals of silver per house, in 1821 Rs. 5,951 were raised for presents for one of the king's sons, and in the same year Rs. 1,721 were collected for the travelling expenses of the new *wun*.

All demands were shared out by the *wun* among the *taiks* according to the number of houses in each. The *thugyis* then settled the amount to be collected in each *ywagaung's* charge, and lastly the *ywagaungs* and assessors or *thamadis* fixed the exact sum each household had to pay. Families were divided into four assessment classes. The first were the well-to-do who owned land, cattle and slaves, the next were like the first but did not own slaves, the third were families that depended on their own labour and did not own land, with these were classed newly married well-to-do people, the last were those too old to do much work and newly married people of the third class. These classes paid in the proportion of 7, 5, 3 and 1. *Póngyis*, maimed, infirm, incurables, bachelors and village officials were exempted. The circle of Sabyin north of Taungup paid no taxes but had to send 60 coolies loads of the *tazin-ban* or Queen's orchid (Bulbophyllum Sp.) to the palace every year.

Small sums were also raised by a poll tax on travellers and by transit dues on goods. In war time a grain tax was levied in order to feed and maintain the army and was hence called the *sit-su*. During the eight years preceding the annexation of Arakan, the invasions of Eastern Bengal carried on by Maha Bandoola had made this tax a perpetual one, and at the time of the annexation it was the one that pressed most heavily on the people. It was levied in kind, at first at the rate of five baskets a plough, but afterwards it was as high as nine baskets; it was on the basis of the latter rate that we afterwards levied a plough tax.

First year of British rule.

During the continuance of the first Burmese war each household was required to provide and maintain a pack bullock and a driver for service with the army operating

from Prome. After the annexation the attempt made to raise revenue has been described in the preceding chapter, where it is stated that the *taiks* or circles were practically put up to auction. The 30 *thugyis* who were appointed, tendered to pay Rs. 1,53,636 and to manufacture 43,940 maunds of salt which they would deliver to Government at four annas a maund. To show how preposterous these offers were it may be stated that it was not until 70 years later that the district was advanced enough to pay as much as one and a half lakhs in land revenue and capitation tax; and that the manufacture of salt became possible only when the price was 8 annas a maund, and that the industry did not become a flourishing one, until some 30 years later when the price was 12 annas a maund. For such big promises the fulfilment was small, although the *thugyis* exerted themselves to such an extent to collect these demands, that the people were driven to migrate. By the middle of 1827 three *thugyis* had absconded, and the country was becoming depopulated; yet only about Rs. 10,000 and 3,000 maunds of salt had been paid in. The two local Commissioners came to Sandoway and reduced the demand to Rs. 56,274, they also notified that the manufacture of salt would be optional and that the price paid would be seven annas a maund. But even then little progress was made. By the middle of 1828 the *thugyis* had paid in only Rs. 26,636 and no more salt was brought in; the district officer by his personal exertions collected Rs. 3,054 more, so that not quite Rs. 30,000 in all were received. In the meantime the district officer held an enquiry which showed that besides the sums paid in, an additional Rs. 20,000 had been taken out of the people by the exactions of the *thugyis*, by the purchase of salt at high prices in order to provide the Government demand for which they were repaid four annas a maund, and by having to make up to coolies for the small wage paid to them by the commissariat department. It also showed that each household had paid on the average Rs. 18 and that the people were on the verge of rebellion. All further collections were stopped, the speculating aspirants for *thugyiship* were replaced by hereditary men, and a house tax was introduced.

When the enquiry just referred to revealed the true state of affairs, it was at first suggested by the Commissioners that a land tax should be introduced. But the district officer pointed out that in that case somewhat more than two-thirds of the population would escape taxation, since only about one-third were agriculturists and that the

area under cultivation was so small that the tax would amount to little. He also pointed out that there was no means of measuring land, and that it would be difficult to arrive at a rate for *taungyas* which formed a great portion of the cultivated area, he therefore suggested a house or property tax. He was directed to hold another enquiry with a view to obtaining a basis for taxation. This enquiry gave the average income of a family as Rs. 72 and the average cost of living as Rs. 42. It was settled that the tax should be one-sixth of the gross income in the plains, and one-seventh in the hills. The assessment was made by circles. Letwe-anauk circle north-west of Sandoway town was assessed at Rs. 15 a house, 6 circles at Rs. 14, 2 at Rs. 13, 8 at Rs. 12, 4 at Rs. 10, one, Sabyin, at Rs. 9 in order to accustom it to taxation, and 3 hill circles and the 5 circles south of the Kyeintali river were assessed at Rs. 5 a house. The assessment of households was to be made by *punchaits*, the equivalent of the Burmese *thamadis*, and was to be according to the four Burmese standards already referred to. In addition to the persons who used to be exempted in Burmese times one follower for each *ywagaung*, and two for each *thugyi* were also exempted. This mode of taxation lasted two years; Rs. 33,500 were collected in 1829, and Rs. 37,617 in 1830. But the district had been so depleted of coin that 22 out of the 30 circles paid the tax in kind, or in elephant tusks, or gold and silver bullion. The collections were so much larger in the second year, because owing to the rebellion referred to in Chapter II, no revenue was collected from 3 hill circles in 1829.

Plough tax and Capitation tax

Towards the end of 1830 the new district officer condemned the house tax. He reported that it was easy to conceal houses in such a hilly district, that the *punchaits* consisted of relations and friends of the *thugyi* who oppressed the friendless and took bribes to reduce assessments, and that it was difficult to know how to assess trades and owners of different kinds of property. Again a land tax was suggested but the former reasons against the imposition of such a tax were still in force. It was settled that in the absence of means for measuring land, a tax at the rate of Rs. 5 a plough, which was about the equivalent of the nine baskets taken in Burmese times should be imposed. The demand however was not, as in the case of the house tax, levied at different rates by circles but one rate was applied throughout the district. At the same time it was ordered that a capitation tax should also be collected. These taxes were introduced in 1830-31, in which year the

plough tax yielded Rs. 6,410, and the capitation tax about Rs. 15,000. In the following year the plough tax was raised to Rs. 6 and the yield was Rs. 7,008. The next district officer condemned this tax. He pointed out that the incidence was not fair, because a man with a small holding paid the same amount as the man with a much larger holding, and he showed that cultivation had decreased since the imposition of the tax. This led to the introduction of the land tax as we know it now.

oduc- of l tax. Sandoway can claim the distinction of being the first district in Burma in which land was taxed by measurement; for this system was not introduced into the other three districts of the Arakan Division until a year after it had been in force in Sandoway. In 1832 lands were measured by surveyors sent from Chittagong. Their land measures were a *khannee* containing 1,920 square yards or about two-fifths of an acre, and a *dhoon* containing 30,720 square yards or about 6⅓ acres. The Burmans called the latter measure a *kyat* or rupee because it contained 16 *khannees*. Their "chain" was a bamboo 8 cubits in length and divided into 4 parts of one yard each. A standard bamboo sealed at both ends was deposited in the district office. To this day the people of Sandoway always state distances in bamboos of this length. As in the case of the plough tax the rates imposed applied throughout the district, they were fixed per *khannee* and were as follows :—

	Rs.	A.	P.		Rs.	A.	P.	
Paddy ...	0	8	0	or	1	4	0	an acre.
Tobacco ...	1	4	0	or	3	2	0	"
Betel vine ...	1	4	0	or	3	2	0	"
Betel nut ...	0	12	0	or	2	0	0	"
All other crops ...	0	14	0	or	2	4	0	"

Taungyas were to pay one rupee a dah or in other words one rupee for each person employed in felling. Garden lands attached to a cultivator's dwelling and not exceeding one *khannee* in area were free. Capitation tax was continued. The yield from land tax in 1832-33 was Rs. 8,969. In the next year the rates for *dani*, miscellaneous crops and *taungyas* remained the same, but the rate for paddy was raised to 10 annas and the rates for other crops were doubled. The yield in 1833-34 was Rs. 10,858. Since then land tax has remained in force and has in course of time become the chief source of revenue in the district. The development of this tax from the crude form of one rate for paddy throughout the district to a system that fixes rates according to assessment tracts will be briefly traced.

There was one rate for paddy throughout the district, for eighteen years after the introduction of the tax. But no settlement of land revenue was made, the rate was altered from time to time according as cultivation flourished or declined; it fluctuated between eight annas and ten annas a *khannee*, and at one time it was reduced to five annas because the higher rates had driven agriculturists to give up permanent cultivation and to take to *taungyas* instead. It was in 1851 that the principle of fixing different rates for different parts of the district first appears. In this year eight annas was fixed for the country south of the Kyeintali river, nine annas for the country to the north as far as the Mawyôn spur 12 miles south of Sandoway, and ten annas for the rest of the district. These three divisions coincide roughly with the three price tracts that were formed and taken into consideration at a subsequent settlement. The records do not mention that the circle was ever used as a unit of assessment for paddy lands; and indeed the circles which are long, narrow strips of country, stretching from the Yoma to the sea comprise paddy lands differing greatly in productiveness and could never form suitable units of assessment. The next step forward was to fix rates by *kwins*. District rate.

The *kwin* has come down to us from Burmese times and was the territorial division next below a circle; for as explained in the preceding chapter the village tract was not a permanently defined area. Wherever cultivation occurred, a patch of country generally not exceeding one square mile in extent, and surrounded by natural features was given a distinctive name and was a *kwin*. There were 1,427 in Sandoway. The modern *kwin* is a survey unit, generally coinciding with the charge of a village headman, and is made up of two or more of the old *kwins*. The rates at which land revenue is now assessed is notified by these later day *kwins*. *Kwins.*

Kwin rates are first mentioned in 1853-54, but no rates can be traced until 1862-63 when also measurement in acres first appears. The highest rate for paddy was Rs. 1-10-0 an acre or the old rate of ten annas a *khannee*, the lowest was 12 annas an acre or the old rate of 5 annas a *khannee*, and there were three intermediate rates. For other crops the rates held as before throughout the district, and were per acre, garden Rs. 2-8-0 and all other crops Rs. 1-8-0. Although the principle of *kwin* rates was accepted the old idea of having one rate throughout the district still held its ground, and very few *kwins* were allowed rates lower than Rs. 1-10-0. *Kwin* rates.

le- t of ;-66.

In 1865-66 a settlement was ordered with a view to reducing rates, on account of exhaustion of soil in some *kwins*, and generally to encourage cultivation. The instructions given to the Deputy Commissioner of the district who carried out the settlement, were similar to those that now guide Settlement Officers, except that rates were to be based on gross and not on net outturn. The result of the settlement was that 11 rates by *kwins* were fixed for paddy. As before the highest rate was Rs. 1-10-0 an acre, and then each lower rate decreased by two annas down to a rate of four annas an acre; but for some reason a ten-anna rate was not imposed. Apparently the idea of having the rates as uniform as possible was still kept in view, for of the 1,280 *kwins* north of the Kyeintali river as many as 1,174 were assessed at the highest rate. One important innovation however was introduced, and that was to allow a second rate in 7 *kwins*. In the country to the south of the Kyeintali river remoteness from market was taken into consideration, and a rate of Re. 1 an acre was imposed in 103 *kwins* and of Re. 0-12-0 an acre in the remaining 44 *kwins*. These rates are still in force in those parts of the district which have not been brought under other settlements. Other crops were assessed at the highest paddy rate in the circle, and this is the only instance in which the circle was used as a unit of assessment.

e- of -98.

In 1897-98 an area of 148·26 square miles, which had been surveyed by regular agency and had been divided into 192 *kwins* in the way described above, was summarily settled. In addition four large expanses of water were marked off as *kwins*. The area included portions of 23 out of the 31 circles in the district and extended into all three townships. The most important feature of this settlement was that the principle of allowing a second rate in a *kwin*, which had been tentatively used in the previous settlement, was applied generally. Crop cuttings were taken and each *kwin* was divided into first and second class soils according to productiveness. The crop cuttings gave results which led to the adoption of five degrees of fertility, of which the yields were roughly 40, 30, 25, 20, and 15 baskets an acre respectively. But in forming the *kwins* into assessment tracts the standards of productiveness were not strictly followed. Instead of placing each of the two portions of a *kwin* in one of the five fertility classes, the following method was adopted. A sixth class was formed representing a productiveness of slightly under 25 baskets; then these classes were formed into three tracts of two classes each, and *kwins* were

placed in one of these tracts, according to the productiveness of the first class soil in the *kwin*. This arrangement could be followed in a country consisting of large alluvial tracts in which the ratio of difference between first and second class lands is fairly constant; but it does not work equitably in a country of an undulating nature like Sandoway, where although the best lands in two adjoining *kwins* may be equally productive, the second class soils in them are not of similar fertility. In fixing rates it was taken into consideration, that the former highest rate for paddy had been Rs. 1-10-0 an acre, and that the highest rate in Akyab where a market is nearer at hand was Rs. 3 an acre, therefore a rate of Rs. 2-8-0 was fixed for the 40 basket yield Then by applying the rules of proportion, the other five yields gave rates of Rs. 1-14-0, Rs. 1-10-0, Rs. 1-8-0, Rs. 1-4-0, and Re. 1 respectively. In Gwa township the old disadvantage of remoteness still existed, and was allowed for by lowering all paddy rates there by 10 per cent. In the case of other crops the circle rate was done away with and a set of rates was again fixed for the whole district. They were per acre for garden Rs. 1-12-0, for tobacco and chillies Rs. 3, for sugarcane Rs. 4, and for all other crops Rs. 2. These settlement rates were introduced on 1st July 1899 and are to remain in force until 30th June 1914. At the same time the rates fixed for crops other than paddy were extended to the rest of the district. The final result of the settlement was that the revenue from paddy lands was increased by 17 per cent. and that from other crops by 36 per cent.

Settlement of 1905-06

In 1905-06 a further area of 120·20 square miles, which had been surveyed and divided into 99 *kwins*, was summarily settled. This area was scattered over 21 circles and included portions of the 8 circles which had not come under settlement in 1897-98. Again the *kwins* were divided into first and second class soils according to the results of crop cuttings, and again the same five grades of productiveness were found. But in grouping *kwins* so as to form assessment tracts an important advance was made on the method adopted at the last settlement. On the present occasion the *kwins* were not placed in previously marked off tracts, but they were arranged in groups according to the two grades of outturn in each *kwin*. It was found that out of a possible combination of ten such groups, the 99 *kwins* fitted into four groups of 40 and 25 basket yields, 40 and 20, 30 and 20, and 25 and 15. In deducing rates it was borne in mind that the very best lands gave yields exceeding 40 baskets, and that in the case of other lands, the standards

of fertility adopted represented very nearly the maximum yield. It was therefore determined to take a larger share from the best lands and to treat inferior lands leniently. A rate of Rs. 3 was fixed for the 40-basket yield, and the proportions worked out for other yields were modified and rates of Rs. 2-2-0, Rs. 1-12-0, Rs. 1-4-0 and Re. 0-14-0 were adopted. Also the rate for the 25-basket yield in the first group was reduced from Rs. 1-12-0 to Rs. 1-10-0, because these lands were somewhat inferior to the lands represented by the 25-basket yield in the fourth group. Another improvement on previous methods was the forming of more suitable price tracts. Formerly the only paddy market was at Akyab, and the Gwa Township which was farthest from it had alone obtained concessions on this account. But since the last settlement Gwa had found a new market in Bassein with prices slightly lower than those ruling at Akyab. The district was therefore divided into three price tracts, the northern which commanded the best prices and depended on Akyab, the southern which depended on Bassein, and the central which was midway from both markets and where prices were lowest. A deduction of one-fifth to one-seventeenth of the deduced rates was allowed in the southern, and of double this reduction in the central price tract. Thus each of the four fertility groups was sub-divided into three portions, and 12 assessment tracts giving 24 rates were formed. But in 28 *kwins* in Gwa township the new rates were more than double the old Re. 1 and Re. 0-12-0 rates, and it was notified that in these *kwins* rates of Rs. 2 and Rs. 1-8-0 would be assessed for a period of five years.

With regard to other crops the only change made was that *dani* which had formerly been classed as garden land and had been assessed at Rs. 1-12-0, was now to be assessed at Rs. 3 in these 99 *kwins*. The rates came into force in 1908-09 and expire at the same time as the rates fixed in 1897-98.

mary story tes.

Summarizing the history of paddy rates will not be out of place because those now in force will expire on 30th June 1914. The oldest prevailing rate for paddy was Rs. 1-10-0, and it was for many years the sole rate in the district. In 1851 or nearly 20 years after the imposition of land tax the principle of having different rates for different parts of the district was recognised, and two lower rates were allowed. This was followed up in 1853-54 by fixing rates by *kwins* and two more lower rates were added making five rates, in all. A revision of rates in 1865-66 added six new rates, all of which were lower than Rs. 1-10-0, and also allowed a second

rate in seven *kwins*. But although there were now eleven rates in the district, the lower rates were conceded with a very sparing hand and it may be said that practically all paddy lands paid Rs. 1-10-0 an acre. The settlement of 1897-98 definitely allowed two rates in each *kwin* and introduced five new rates, of which four were higher than Re. 1-10-0. Finally the settlement of 1905-06 brought in six new rates, of which two were higher than the previous highest rate; and it also classed lands in a more equitable way. The last two settlements had however abolished three of the lowest rates, of 1865-66, so now there are nineteen rates in force. There are fourteen which rise by two annas each from Re. 0-10-0 to Rs. 2-4-0, there are two odd rates of Re. 1-7-0 and Re. 1-11-0 in force in Gwa, and there are three rates above Re. 2-4-0, which rise by 4 annas each to Rs. 3.

Growt of Lar Rever

When land tax was imposed in 1832-33 it yielded barely Rs. 9,000 and was not the chief source of revenue; both Capitation tax and opium yielded much more. Land revenue took ten years to catch up the former, and it was another ten years when the annexation of Lower Burma put an end to the exportation of opium, before the revenue from land exceeded the revenue derived from this drug. Since then land tax has held its place as the chief source of revenue. But except when special circumstances intervened the regular expansion of land revenue is small, because, owing to the nature of the country as explained in the chapter on Agriculture the yearly rate of extension of cultivation is small. In 1846-47 land revenue amounted to nearly Rs. 30,000. In the next 24 years it increased by Rs. 10,000 in every 12 years and amounted to Rs. 50,000 in 1870-71. During the next 16 years it increased by a similar sum in every 8 years and reached Rs. 70,000 in 1885-86. After that the district was overrun by dacoits and for 8 years there was hardly any advance, in 1893-94 the amount being only Rs. 74,000. In the latter year regular surveys were made and supplementary survey operations were started and in 1894-95 the revenue rose to Rs. 80,000. It remained at this figure until 1896-97, and then the results of further surveys and of settlement operations began to take effect. In 4 years the revenue increased by Rs. 25,000, in the next 5 years by Rs. 10,500, and in the following 5 years by Rs. 16,500 making the total demand Rs. 1,82,539 in 1910-11. The normal rate of increase may be taken as being Rs. 10,000 in 8 years. The revenue is collected at three different times, from *taungyas* yielding Rs. 2,994 in November, from paddy and garden lands yielding

Rs. 1,14,705 in February, and from *kaing* lands yielding Rs. 14,840 in April. The area from which these sums are collected is 80,672 acres, of which 55,885 acres fall within the area which had been regularly surveyed and are under supplementary survey, and 24,787 acres are outside this area.

gency r sessing id llect- g.

We took over from Burmese rule the system of employing *thugyis* to prepare assessment rolls and to collect revenue, also the method of remunerating *thugyis* by paying them commission on their collections. We also recognised *ywagaungs* as assistant revenue collectors, but whereas under Burmese rule their remuneration depended on the generosity of the *ywathugyis* we laid down that they should be paid commission on the sums collected by them. When house tax was in force *thugyis* were allowed 8 per cent. on total collections, and Re. 1-0-0 for every revenue-paying house on the rolls; *ywagaungs* were allowed 2 per cent. on sums collected by them. When the taxing of land by measurement was introduced *thugyis* were not relieved of the duty of preparing assessment rolls. They were required either to employ surveyors to measure cultivated lands yearly, or they were required to qualify to do this themselves, and they had to prepare the rolls from these measurements. They were allowed 15 per cent. on collections, their clerks 2 per cent. and *ywagaungs* 4 per cent. These rates remained in force until 1850. In 1851 the rate for *thugyis* was reduced to 14 per cent. and nothing was allowed for their clerks, but on the other hand the rate for *ywagaungs* was raised to 7 per cent. In 1860-61 the rate for *thugyis* was further reduced to 10 per cent. but their emoluments were to be increased by putting them in charge of larger tracts which were to be formed by amalgamating circles when vacancies occurred. Thus in 1889-90 we find 21 *thugyis* in charge of 31 circles. In 1864-65 when *ywagaungs* became rural police officers and were relieved of the responsibility of collecting revenue the payment of commission to them ceased. In the same year it was ordered that *thugyis* should receive 10 per cent. on collections up to Rs. 6,000 and 5 per cent. on collection above this amount; and these rates of commission are still in force in the case of *taikthugyis*. But a change of system began in 1890-91 when the Village Act was extended to this district, and the question of remunerating village headmen arose. It was proposed to do so by putting them in to collect revenue when a circle *thugyi* retired or died and by paying them commission. This proposal necessitated the creating of an agency for surveying lands and

preparing assessment rolls, and consequently it was arranged to have an establishment of *taiksayes* or trained surveyors paid by Government. In 1890-91 two circle *thugyis* retired and they were replaced by two *taiksayes* and eleven revenue-collecting village headmen. The experiment was so successful that it became a standing rule always to replace circle *thugyis* in this way. This rule has been strictly adhered to and in 1911-12 there are only two circle *thugyis* left, but there are 200 revenue-collecting village headmen, and five revenue-collecting ward headmen in towns. These headmen are allowed 6 per cent. on collections in Sandoway, 7 per cent. in Taungup, and 10 per cent. in Gwa.

Land Records Department.

From the very first a district surveyor was entertained for the purpose of checking *thugyis'* measurements, but this plan never worked efficiently, for instance when a tract of country was surveyed by regular agency, it was found that the true cultivated area exceeded the *thugyis'* figures by 42 per cent. The present Land Records Department began with the appointment of *taiksayes*; but it was not organised and placed on a proper basis until regular surveys had been carried out and maps were obtainable. In 1892-93 148 square miles of the most densely cultivated portions of the district were surveyed and maps of *kwins* were published. After this there was no longer any necessity to re-survey cultivated lands yearly, it was only necessary to mark changes each year in order to obtain correct *data* for the preparation of assessment rolls. The name of supplementary survey has been given to the process of obtaining these *data*, and is with the work of preparing assessment rolls, the duty of the Land Records Department.

In 1893-94 88 square miles of the surveyed area which comprised 23 circles were brought under supplementary survey with a staff of one Superintendent, two Inspectors and seven Revenue Surveyors. The Revenue Surveyors were in charge of the area that fell within thirteen circles, in the other ten circles the *taikthugyis* were required to engage surveyors or *taiksayes* to keep up supplementary survey. The district surveyor was retained and was employed in checking measurements in tracts outside supplementary survey, whereas before annual surveys of cultivated lands had to be made. In 1894-95 sixty more square miles, and in 1903-04 120 more were brought under supplementary survey and on each occasion the Land Records staff was increased.

A final development was brought about in 1898-99. It was found that *taikthugyis* or the men employed by them

were incapable of keeping supplementary survey records correctly. In this year Revenue Surveyors were appointed to relieve them of this portion of their duty, but *taikthugyis* were required to contribute towards the pay of these men and to collect the revenue. About the same time the distict surveyor went away on deputation and his appointment was not filled up ; his duty of supervising measurements outside supplementary survey being taken over by the Lands Records staff. There are now besides the Superintendent, one Inspector for each of the three townships, five Revenue Surveyors in Taungup, five in Sandoway, and three in Gwa.

Capitation Tax. The next largest amount of revenue is obtained from Capitation tax. It was introduced in 1830-31 when plough tax was started and has remained in force ever since. It was collected from all persons between the ages of 18 and 60, but the same classes of persons who had been exempted from paying taxes in Burmese times were exempted ; in addition immigrants were exempted for two years. The rate at first was Rs. 5 for married men, Rs. 3 for widowers and Rs. 2 for bachelors ; and in those parts of the district where ploughs were not used for cultivating, the rates were Rs. 2 for married men and Re. 1 for widowers, bachelors were exempted. In 1833 in order to encourage trade the rate for traders was reduced to Rs. 3, and in 1838 in order to encourage immigration immigrants were exempted for 7 years, also in order to attract artisans this class was exempted altogether. In 1865 owing to the poverty of the district the rates were revised, married men were to pay Rs. 4, widowers and bachelors Rs. 2, and the lower rates of Rs. 2 and Re. 1 were allowed only to Chins who work *taungyas*. At the same time the concessions mentioned above were withdrawn in the case of traders and artisans as the effect aimed at had not been obtained, and the period of exemption for immigrants was reduced to 5 years. These rates are still in force except that now immigrants are exempted for only 2 years. Proposals were put forward in 1895 and again in 1907 to raise the rates to Rs. 5 for married men, and Rs. 2-8-0 for widowers and bachelors, but were rejected owing to the poverty and remoteness of the district, and to the little expansion of trade.

The yield began at Rs. 15,000, and increasing on the average by Rs. 600 a year reached Rs. 28,000 in 1852-53. During the next thirty years the average yearly rate of increase was Rs. 750, and in 1881-82 the collections amounted to Rs. 50,000. During the following twenty years the

rate of increase was Rs. 1,000 a year, and this brought the yield up to Rs. 70,000 in 1901-02. The same rate continued for the next four years, but after that owing to greater strictness in granting remissions and in assessing strangers the collections rose by Rs. 6,000 in the next three years, which made the tax amount to Rs. 80,000 in 1908-09. Since then there has been a falling off to the former rate of Rs. 750 a year and Rs. 81,419 were collected in 1910-11. The rolls are prepared by village headmen who also collect the tax and are paid a commission of 10 per cent.

The fishery revenue of the district is small, it was only Rs. 4,142 in 1910-11. Dues were taken on the introduction of British rule but were abolished after a year or two. It was not until 1864 that rules were framed for the purpose of raising revenue from fisheries. Only nets employed for taking big fish were taxed and there was a fixed rate of Rs. 2 for each; fish however were allowed to be taken free for domestic consumption, and free fishing was allowed in remote streams and in localities where the *taungya* system of cultivation was practised. In 1870-71 the fee on the biggest net in use was raised to Rs. 20, and two kinds of nets that were in more common use were taxed according to length. The rules framed in 1872 withdrew the concessions regarding free fishing, because it had been found that they gave rise to constant disputes and prosecutions. In 1875 all the previous rules imposing taxation were consolidated and put on a legal footing by the passing of the Burma Fisheries Act, 1875. The new rules taxed all nets that varied in size according to their length, and by the latest rules the taxing of implements is further governed by the size of mesh. Fisheries

The revenue raised is derived from the sale of leased turtle banks and from license fees on nets. The whole of the coast line facing the open sea and stretching from the mouth of the Kaleindaung river to the mouth of the Kyaukchun stream has been divided into 17 turtle banks. At the yearly sales, they fetched about Rs. 1,400, but latterly the sands are being washed away and fewer turtle resort to the banks and the sales realize only Rs. 800 to Rs. 900 a year. By far the most common fishing implements in use are those for taking the shoals of shrimps which begin to arrive off the coast towards the end of the rains. They are made of coarse cloth and range from the dip nets used by a child and known as *hmyin paiks*, to hauling nets up to 200 cubits in length and known as *bu paiks*. The fluctuations in the revenue derived from nets are chiefly

due to whether these implements are taxed or not. At first they were not taxed and from 1864-65 to 1888-89 the fees from nets amounted to between Rs. 400 and Rs. 500 a year. In 1889-90 they were taxed and this helped the revenue to rise to nearly Rs. 2,000. After that there was a steady increase up to Rs. 3,000 in 1898-99, and then in 1899-1900 there was a sudden jump to Rs. 6,000 because greater care was taken to see that no unlicensed fishing was being carried on. Since then the revenue has declined. In 1901-02 it dropped to Rs. 5,000 because the fee on the *hmyin paik* was reduced from Rs. 5 to Rs. 2 and a further drop occurred in 1907-08 when the *hmyin paik* was declared free. The total fees collected in 1910-11, were Rs. 3,303 ; the village headmen collect them and receive a commission of 10 per cent.

Miscellaneous Land Revenue.

Sums of from Rs. 1,000 to Rs. 2,000 a year are collected as fines imposed under the Village Act, fees for surveying *pottas*, royalties on minerals, and rents from leased town lands. The largest collection is under the first mentioned item and consists chiefly of fines imposed by village headmen who collect about Rs. 700 a year. Formerly a sum of about Rs. 2,000 a year used to be obtained from the sale of the right to collect edible birds nests, but about 1860 this source of revenue ceased. The collector used to go as far as the Andamans in search of nests and in one of his visits in 1834 he stole two Andamanese and brought them to Sandoway much to the embarrassment of the district officer and of the Commissioner because the Emancipation Act had but lately been brought into force.

All the sources of revenue dealt with above belong to the first head of Revenue Accounts which is known as "Land Revenue" ; of the eight other principal heads, Forest has been dealt with in Chapter V, Customs and Tribute do not occur in this district, and the remaining five are Salt Stamps, Excise, Income-tax and Registration.

Salt.

Formerly any one could manufacture salt but it had to be sold to Government at prices which were fixed from time to time At the annexation the price was fixed at four annas a maund, but at such a low price it was impossible to manufacture salt with profit in Sandoway and it was not until 1839 when the price was raised to eight annas a maund that salt could be again manufactured in this district. In 1859-60 the direct taxation of locally manufactured salt began. It was conceded that since Burma paid Capitation-tax which was not levied in India, the excise duty to be imposed on locally manufactured salt was not to exceed eight

annas a maund, which was at that time the customs duty on imported salt. On this basis a license fee of eight annas for the earthen pot used, which had a capacity of about 2½ gallons, was considered to be suitable and this was the rate fixed. Afterwards when an iron cauldron came into use the fee for it was fixed at Rs 5. Evidently these rates were considered very low, for when the customs duty was reduced to three annas a maund in 1865 the license fees were not reduced. No change occurred until 1888.

In this year the customs duty was raised to one rupee a maund and the license fees were similarly raised 5⅓ times to Rs. 2-10-8 a pot, and Rs. 26-10-8 a cauldron. But it was soon found that a proportionate rise in excise duty did not protect foreign salt sufficiently, and since then the history of salt revenue in this district, is but an account of the suppressive measures ordered by the Supreme Government for the purpose of protecting the large revenue it derives from imported salt. In 1889 and again in 1890, the license fees were revised until they were Rs. 5 an earthen pot and Rs. 25 an iron cauldron. In answer to this the salt boilers used larger vessels, so the capacity was fixed at 5 gallons for an earthen pot and 10 gallons for an iron cauldron. But still the outturn of local salt kept up and was under-selling foreign salt, because salt-boilers extended their working hours. The next suppressive measure had effect. It was ordered in 1895 that in future manufacture would be allowed only in certain restricted areas, which were to be eight *kwins* in Taungup, one in Sandoway and 17 in Gwa. The outturn of salt declined at once by one-half, and when this restriction came into full force in 1898, the outturn fell to one-fifth of the former quantity. In 1900 the fees were raised to Rs. 20 and Rs. 100, and in the following year to Rs. 25 and Rs. 125 for an earthen pot and for an iron cauldron respectively. In 1905 it was ordered that licenses should be granted only to persons of certain named classes, and the outturn decreased again. In 1906 and again in 1907 the area in which manufacture was to be allowed was further restricted, and now salt can be made only in five *kwins* in Taungup and one in Sandoway. The last suppressive measure ordered in 1910 is the death blow of the industry; it lays down that licenses can be given only to persons who had licenses in the preceding year. At the same time it was ordered that the fee should be Rs. 31 for an earthen pot and Rs. 156 for an iron cauldron. The largest amount of revenue derived from salt was Rs. 7,790 in 1892, it was Rs. 1,925 in 1910. It is collected by village headmen who receive a commission of 5 per cent.

tamps. The incidence of stamp revenue works out to a smaller sum per head of population in Sandoway than in any other district in Lower Burma except Thayetmyo and Kyaukpyu, and is a fairly correct indication of the position which the district occupies in regard to trade and business activity. During the 30 years from 1860-61 to 1890-91 the receipts rose from only Rs. 2,000 to only Rs. 4,000, but in the last 20 years there has been an increase of a little over Rs. 10,500. In this period the receipts from Non-Judicial stamps increased by Rs. 2,500 or by a little over 190 per cent, and Court-fees by Rs. 8,000 or by a little over 300 per cent. The increase under the first head has been steadily maintained from year to year, but the peculiar way in which Court-fees has increased may be mentioned. The figures show that excluding years in which there were abnormal causes which did not last, Court-fees rise by a series of jumps and pauses; this has happened three times. First in 1892-93 when there was a rise of Rs. 1,200, and at the end of the next seven years the total increase was only Rs. 1,500. Then in 1900-01 there was an increase of Rs. 1,000, and at the end of the next six years there was a total increase of only Rs. 700. Lastly in 1907-08 there was an increase of Rs. 3,100 but in 1910-11 the receipts were slightly less than those of 1907-08.

cise; quor. The gross receipts from liquor per 10,000 of population are higher in Sandoway than in any other district of Arakan, but they are less than in the rest of Lower Burma. The latter fact is not due to the people being more abstemious, but to their drinking a cheaper liquor. In spite of the great bulk of the population being Buddhists and Mahomedans the drinking habit is almost universal, one sometimes even hears a woman admitting that she was drunk. The chief drink is *tari*, the fermented juice of the *dani* palm which is grown in every *kwin* except the few in which the creeks are beyond the reach of salt water. The palm yields juice from September to May; providentially during the ploughing and sowing season from June to August, no *tari* is procurable, and as this is the rainiest period of the year the people can manage to do without liquor. Latterly there has been a great increase in revenue derived from outstills for the manufacture of country spirits, but this does not denote a growing taste for this liquor, it denotes rather excessive bidding at auction sales and better suppression of illicit distillation. Country spirits is the drink of Chinamen, Natives of India and Chins.

In 1827 when the district was formed, a Bengali

bought the liquor monopoly for which he was to pay Rs. 400 monthly; he farmed it out to *thugyis* for sums of Rs. 100 to Rs. 120 a month, paid in one instalment and absconded. After that shops were established and sold by auction. As early as 1829 it was proposed to introduce an Excise Act, but the proposal was negatived because the revenue to be expected was not sufficient to cover the cost of establishment. In 1832 shops were abolished and manufacture and sale were thrown open to any one who took out a yearly license on Rs. 16 stamped paper for spirits, and Rs. 28 for *tari*. When Bengal Act XXI of 1856 was extended to the district the farming system was introduced. At the same time outstills were done away with, and instead a distillery was set up at Sandoway, which paid Rs. 1-4-0 a gallon duty and half an anna a gallon distillery license fee. It was abolished together with the farming system when the first Excise Act for Burma was enacted in 1871. Under this Act outstills were again allowed and have continued up to the present time. There are now three, one at the headquarters of each township; but proposals are being considered to do away with outstills and establish a warehouse to supply shops with spirits properly manufactured at a central distillery. During the nineties it was the policy of Government to encourage the drinking of *tari* in preference to spirits, and during those years there were as many as 64 *tari* shops in the district, at present there are 23, but even then Sandoway is well provided with taverns; only three other districts in Lower Burma have more in proportion to population. The *tari* shops and the three outstills are sold annually by action. The revenue grew slowly from about Rs. 1,000 in 1850 to Rs. 6,000 in 1900. Since then it has increased more rapidly owing to the competition for the right to work outstills. In 1909-10 the revenue amounted to Rs. 17,808, of which Rs. 10,300 were from country spirits, Rs. 6,408 from *tari*, and Rs. 1,100 from foreign liquor.

Opium was introduced on the formation of the district in 1827, when the Bengal Board of Revenue sent 4 maunds to the District officer to see whether there was any demand for the drug. It is recorded that this quantity was sold between 1827 and 1830. This looks as if the indigenous population was not much addicted to the use of opium, and even now the consumption per 1,000 of population is 7·4 seers, as against 8·4 in Kyaukpyu, and 9 in Akyab. The licensed sale of opium began in 1833 when any one who took out a yearly license on one rupee stamped paper could

Opium

purchase any quantity of opium which was sold by Government at Rs. 35 a seer. In a short time a large traffic with Burma sprang up, for traders used to come and load up with opium just like they did other commodities; several shops were established and opium became the chief source of revenue. This trade led to smuggling on a large scale, and in 1838 the price was reduced to Rs. 18 and in 1846 to Rs. 10, in order to make opium so cheap that smuggling would be unprofitable. In 1852, the year of the annexation of Lower Burma and the last year of the export trade, there were 19 licensed vendors and as much as 49 maunds were sold ; in the following year the quantity sold dropped to 7 maunds and continued at about this figure until the "farming" system was introduced. In 1860 the price which had been Rs. 16 since 1850 was raised to Rs. 20, and consumers took to eating opium instead of smoking it; ever since then opium is, except in the case of Chinamen, eaten and not smoked in this district.

Restrictions regarding the use of opium began in 1860 when Bengal Act XXI of 1856 was extended to Sandoway. According to the rules framed under this Act the district formed an opium "farm" which was sold by auction yearly; the amount fetched in 1870-71, the last year of this system, was Rs. 4,000. The Deputy Commissioner fixed the quantity that could be sold during the year, and the farmer was not allowed to sell more than one twelfth this quantity in each month. Individuals could consume any quantity they liked in the shops opened by the farmer, but no one could remove more than one tola during 24 hours: this maximum quantity was afterwards raised to 5 tolas. The farmer was appointed an Excise Officer and he had to keep up a staff of jemadars and peons in order to check illicit practices. During the time the farm system was in force the yearly consumption was about 10 maunds.

The Burma Excise Act of 1871 abolished the farm system and established three shops, one at the headquarters of each township. These were sold annually by auction; the amount obtained in 1880-81 the year before the shops were closed, was Rs. 6,270. The rules under this Act reduced the maximum quantity that could be possessed to 3 tolas, and the other rules in force at the present time are amplifications of the rules made under that Act. A Superintendent and two Sergeants were also appointed, and rural policemen were declared to be Excise Officers. Under the shop system the yearly sales amounted to about 11½ maunds.

In 1881 the local shops were closed, and until 1892

consumers were supposed to get their supplies from the shop at Akyab. But it was found that this repressive measure resulted in less Government opium being bought and more illicit opium was brought into the district. A radical change was made in 1893.

In this year the principle of forbidding purchase or possession by Burmans generally was introduced. It was laid down that in future only Burmans over 25 years of age, who were habituated to the use of opium and who registered their names, could purchase or possess opium. And in order that consumers might be able to obtain Government opium more easily it was to be sold retail at the Treasury, at the prevailing Akyab market price. Few Burmans however registered their names and fewer went to the treasury for their supplies; in 1894 and in 1895 only three maunds a year were sold, and by 1901 the quantity had risen to only nine maunds. This showed that contraband supplies were still being obtained in large quantities.

In 1902-03 registration was re-opened and sterner measures were adopted to prevent unregistered persons from obtaining opium; more Burmans then got themselves registered and when the books were closed in 1903-04 there were 1,151 on the list. No new registration is allowed now, and in 1911 there were only 665 names left on the register. At the same time in order to give facilities to legitimate consumers to obtain supplies of Government opium and so check smuggling, the former three shops were re-opened; but at the same time a Resident Excise Officer was appointed to each shop, to watch sales and to prevent contraband opium being brought in and sold to customers. The result of these measures was that the consumption went up at once to 17 maunds. After that it increased, until it reached 25½ maunds in 1904-05, and the smuggling of opium on a large scale practically ceased. Measures however had to be adopted to prevent shop opium being hawked to unregistered consumers; by degrees, the quantity allowed to be purchased was reduced as nearly as possible to the quantity required for the actual needs of each purchaser. The result is that the consumption has been reduced year by year, until in 1909-10 it was only 16¾ maunds.

In 1832 the revenue derived from opium amounted to Rs. 32,721, the largest amount realized in any one year was Rs 64,470 in 1904-05, and the revenue obtained in 1910-11 was 46,238. Opium ranks third in this district in the list of principal heads of revenue. Besides the Superintendent

who with headquarters at Kyaukpyu has charge of the two districts, and the three Resident Excise Officers, there are two Sub-Inspectors of Excise, who are in charge of the Taungup and Sandoway townships respectively. An Inspector and two additional Sub-Inspectors are to be added under the re-arrangement of establishment sanctioned in 1912, consequent in the amalgamation of the Excise and Salt Departments.

come-
x.

Income-tax was extended to Sandoway town in 1860-61, and at that time only incomes over Rs. 200 were assessed. A non-official assessor on Rs. 150 a month was appointed but was abolished after four months when it was found that the proceeds of the tax would not pay his salary. The sum obtained in that year was Rs. 755 and it was about Rs. 1,000 during the following two years. In 1863-64 when the minimum income liable to taxation was fixed at Rs. 500 it was found that there were no non-officials liable to taxation, but 40 years later when the minimum taxable income was raised to Rs. 1,000 there were 26 assessees. In 1905-06 the tax was extended to the whole district and the number of assessees rose to 55. The number of assessees in 1910-11 was 92, and Rs. 2,842 were collected from them.

gistra-
n of
cu-
nts.

The registration of documents was started in 1833; it was optional, and only commercial transactions were to be registered, the fee was Re. 1. In 1890 only 33 documents were registered, in 1910, there were 278 registrations and the fees amounted to Rs. 524.

tal
venue
istrict.

In 1910-11 "Land Revenue" as defined above, amounted to Rs. 2,19,503; Salt, Stamps, Excise, Income-tax and Registration yielded Rs. 83,385; Forests Rs. 36,497; Law and Justice, Police and Postage stamps Rs. 11,869; making a grand total of Rs. 3,51,247 for the whole district. The revenue has grown to this amount from a sum of Rs. 29,690 collected in 1828.

CHAPTER XI.

Local Self-Government.

Town Committee—Municipality—Constitution of Committee—Transaction of business—Taxation: Houses and lands; Lighting; Hack-cart licenses—Bye-laws—Revenue and Expenditure.

n
-
ee.

The privilege of local self-government has in Burma been granted only to towns. In Sandoway there are no towns, even the headquarters is only a village, but because

it is the headquarters of a district local self-government has been extended to it. A beginning was made in 1882 with the formation of a Town Committee of which the members were the Deputy Commissioner, the Township Officer, and six non-officials appointed on the nomination of the Commissioner. This committee had no power to impose taxation nor to make bye-laws, but it administered a fund known as the Municipal Fund, which was made up of bazaar and slaughter-house rents, and had been in existence since 1870 at least.

Muni pality

The second Burma Municipal Act was passed in 1884, and in the following June, an area including the villages of Sandoway and Thamôk *chaung* was declared a municipality. The area covered about one square mile and the population at that time was 2,069. Since then there has been a small extension of area, but not of any inhabited tract, and in 1911 the population was 3,360. Sandoway was and continues to be the smallest municipality in Burma. Excluding Kyaukpyu which is just a little larger, the next smallest municipality has almost double the population of Sandoway.

Cons tion Com- mitte

The first Municipal Committee was composed of the Deputy Commissioner, the Township Officer, and five non-officials nominated by the Commissioner. Later two more non-officials were added, and at the same time the right to elect all seven non-officials was granted. Under the latest reconstitution the Committee consists of the Deputy Commissioner and the Executive Engineer as *ex-officio* members, and of eight elected members. Of the latter, four represent Burmans, Arakanese and other races of Burma, two represent Mahomedans, one Hindus, and one Europeans and all other races. The elected members hold office for two years. Rules have been framed laying down qualifications for voters, and for membership of Committee; and at first elections were duly held, but after the novelty had worn off, the right to vote or even to nominate candidates for election was not exercised, and now the Commissioner has regularly to appoint all non-official members of the Committee. In spite of this apparent apathy members when once appointed take an interest in their duties and remain on the Committee for a long time. One of them, U I Tha, was on the first Town Committee and has continued to be a member of every Municipal Committee until the present day.

Tran tion busin

A President and a Vice-President are elected by members, the former has always been the Deputy Commissioner, and latterly the Civil Surgeon has generally been elected Vice-President. The ordinary routine business of the

Committee is transacted at general meetings held in the first week of each month, urgent and special business is disposed of at special meetings which are convened when necessary. There are also Sub-Committees to manage different departments. The President or Vice-President and three members form a *quorum* for general meetings, and any three members form a *quorum* for sub-committees. The attendance however is a good deal above the minimum required by law; in 1910-11 the average percentage of attendance at general meetings was 65, at special meetings 64, and at sub-committees 75.

axation.

The question of local taxation engaged the attention of the Committee early in its career. In 1889, or four years after the constituting of the Municipality, Government notified that its yearly grants, which had at one time been equal to two-thirds of the total Municipal income, would in future be reduced to a comparatively nominal sum. The Committee at that time maintained two good schools, and expended altogether about Rs. 8,000 a year on education. On receipt of the intimation from Government it reduced this expenditure by nearly one-half, but even then financial equilibrium was not obtained, and the Committee resolved to impose a tax on houses at the maximum rates allowable.

ouses
d
nds.

The tax was levied according to the number of posts in a house, and hence was known as the house-post tax, it came into force on the 1st January 1890. In January 1900, after the Municipal Act of 1898 had replaced the Act of 1884, the house-post tax was in accordance with the new law, commuted into a rate per square foot on areas covered by buildings. But owing to the number of Municipal institutions that such a small village had to maintain the finances were always in straitened circumstances, and in 1908 the Committee resolved to impose a tax on lands that were not covered by buildings This tax came into force on 1st July 1910. The result of these two measures is that excluding the four large towns of Bassein, Moulmein, Mandalay and Mergui, none of the forty-four Municipalities in Burma raises so large a revenue in proportion to population as Sandoway does from houses and lands.

hting.

The other direct tax in force is a lighting rate. It was first levied on the 1st January 1898, and was a very forward step for such a small municipality to take; for at that time only 11 other municipalities in Burma levied a lighting tax and even in 1910-11 only half the number of municipalities do so. The tax is paid by all houses within a hundred yards of a lamp post, at a rate equal to one-third of the house tax.

Taking these two taxes together the incidence of taxation in respect to them, is higher in Sandoway than in any other municipality, except the four towns named above and Toungoo.

Hack cart licen

Being limited by the few resources that a small town possesses, the Committee has been able to use its fiscal powers in only one other way. It collects fees from bullock carts plying for hire.

Bye-

The chief bye-laws that have been made are the usual administrative ones common to all municipalities. They relate to slaughter houses, bazaars, burial grounds, registration of births and deaths, erection of buildings and to vaccination. There are no trades to regulate; and as regards food and drink, it has so far been found necessary to make bye-laws only in respect of the sale of milk and aerated waters.

Rev and penc ture

Excluding all Government contributions the Municipality started with an income of between Rs. 4,000 and Rs. 5,000 a year, of which Rs. 3,500 were derived from bazaar rents. After the first imposition of taxation in 1890 the revenue rose to about Rs. 6,000, and after the extra taxation of 1898 had been introduced the income was about Rs. 8,000. During the next seven years it expanded slowly, year by year, until it reached Rs. 10,500 in 1907-08. In the following year a new tax came into force, and this together with further expansion under older heads of revenue, brought the income derived from normal sources up to about Rs. 13,000 in 1909-10. The amount realized in 1910-11 was about the same as in the previous year, because there was hardly any advance in the two chief sources of revenue, which are the bazaar yielding Rs. 6,800, and rates and taxes yielding Rs. 4,900. The ordinary contributions the Municipality receives from other funds are Rs. 1,850 a year from Provincial, and Rs. 900 a year from District Cess Funds. The total income in 1910-11 was therefore about Rs. 15,750. The chief head of expenditure used to be the schools, and after they had been provided for little was left to be spent on other purposes. In 1906 Government took over the Anglo-Vernacular School, and the Vernacular school was handed over to private management. This allowed of more money being spent on conservancy and other branches of public health and convenience, but latterly the cost of up-keep of the hospital has increased to such an extent that the expenditure on other heads has again had to be curtailed. The hospital absorbs nearly 30 per cent. of the total Municipal income.

CHAPTER XII.

EDUCATION.

Literacy—Native method: Monastic schools—Establishing of lay schools—Government aid: Vernacular; Anglo-Vernacular—Female education—Number of schools and pupils—Administration.

[L]iteracy. The standard of literacy is not high. At the same time, though below the mean for the whole province, it is higher than in any other district in the Arakan Division. At the census of 1881 the proportion of literates to every thousand males was 349, and at the census of 1911 it was 347, so that during a period of 30 years there has been no advance in the primary education of males. On the other hand there has been substantial progress in female education, in 1881 there were only 6 literate females in every thousand, in 1891 there were 14, in 1901 there were 32, and in 1911 there were 38. The Gwa township has the highest standard of literacy, this is due to it being the most Burman part of the district and to the number of schools established in Chin villages by the American Baptist Mission. Taungup comes next, Sandoway township is last because there is a large Mahomedan population and in consequence there are fewer *pôngyi kyaungs* or monastic schools than in the other two townships. The most literate portion of the whole district is the island of Padin, where for generations past there has been a school of native medicine which is held in repute throughout the district.

[Na]tive [met]hod-[Mo]nastic [sch]ools. No schools were kept by laymen in Burmese times, the only schools were those in the *pôngyi kyaungs*. All village boys were sent to the *kyaungs*, even if for a short time only, but they were looked upon more as attendants on a religious man than as pupils in a school. No regular school sessions were held, yet in all of them the *pôngyis* taught boys who stayed long enough, to read and write and made them learn certain Pâli texts by rote. In some, where the *pôngyi* was a proficient in the subject, a few of the more promising boys were initiated into a kind of arithmetical and astrological calculations, which were chiefly used in forecasting the future. No fees whatever were taken, the few school requisites being provided either by the parents of boys, or by the *taga* or supporter of the *kyaung*.

[Esta]b-[lishi]ng [la]y [scho]ols. It was in 1866 that Government first took up the task of fostering education. At that time monastic schools were still the only schools in existence, and since it was not

customary to give money to *pôngyis*, Government supplied them with simple text books and employed teachers to go round to the *kyaungs* and introduce the teaching of new subjects. Little good however was done under this system. Education continued to be of a most fragmentary nature, for as before, school sessions were not continuous, and *pôngyis* would not interest themselves in the teaching of the new subjects. In 1868 Government resolved to encourage the establishing of lay schools, in which it would be easy to insist on prescribed subjects being taught. But in order not to suppress *pôngyi kyaungs* altogether, grants of money were given to the *tagas* of those which, though not following the course of studies prescribed by Government, yet imparted sound instruction on their own traditional lines. The progress made in the direction of establishing lay schools was slow, owing to the lack of teachers and to the innovation of charging school fees. The fees usually charged are two annas a month in the Lower Primary, four annas in the Upper Primary, and eight annas in the Middle Standards. Even after 20 years, or in 1888, there were only 8 lay schools established, in 1898 there were only 17, and in 1910 there were 43. The establishing of lay schools has not caused a decrease in the number of monastic schools, but it has taken boys away from them, and it has made some of them come into line with the Government course of studies. In 1904 there were 100 monastic schools with 1,942 boys, as against 36 lay schools with 1,167 pupils; in 1910 there were 105 monastic schools with 1,617 boys, as against 43 lay schools with 1,852 pupils.

Gove[rn]ment Vern[acu]lar ed[uca]tion.

Under the present system all schools, whether monastic or lay, that teach the courses prescribed by Government are classed as "public" schools, and are regularly inspected and examined. They are given grants of money, known as equipment, building, salary and result grants. The last of these is the most important, and is awarded in the form of a sum per *capita* on the passes obtained at the yearly testing examinations, held by the staff of inspectors. All other schools are termed "private" and though visited and advised are not assisted in any way. In 1910 there were 58 "public" schools including 15 monastic, and 90 "private" all of which were monastic.

The sums given in grants were Rs. 1,509 in 1889, Rs. 2,757 in 1899, and Rs. 3,965 in 1910. Of the last named sum municipal revenue contributed Rs. 873, District Cess Funds Rs. 2,252, and Provincial Funds Rs. 840. The Municipal and Cess Fund contributions were below the average because

the schools fared badly at the annual examinations; but even in the best of years the Municipal and Cess Funds of this district, on which fall the brunt of supporting education, are too poor to contribute large enough sums and in consequence there is next to no progress. In addition to the above, Provincial Funds maintain a vernacular school for boys at Taungup, and one for girls at Sandoway; these schools cost Rs. 3,655 in 1910, so that in that year the total expenditure on vernacular education was Rs. 7,620.

nglo-erna-ilar.

There are only two Anglo-Vernacular schools in the district, both are in Sandoway town. The first was started by Government in 1876, it was maintained by Municipal Funds from 1879, and in 1906 Government took it over again. It teaches up to the 7th Standard and in 1910 had 187 pupils. Attached to it is a hostel maintained by District Cess Funds. The other school was started by the American Baptist Mission in 1885 as a vernacular school, but in 1898 an Anglo-Vernacular side was opened to admit Christians and Chins only, and now it has 55 pupils. It also teaches up to the 7th Standard and Government gives it a yearly grant of Rs. 600. There is a boarding establishment attached to this school.

emale luca-on

The chief feature in the recent history of education in the district is the great advance made in female education. In 1889 only 31 girls attended school, in 1899 the number was only 118; but commencing with 1904 the numbers increased greatly until in 1910 the attendance was 748, or one-third the total number of the pupils attending Government and public lay schools. Most village schools receive girls as well as boys, and in the 12 schools known as girls' schools young boys are also admitted, except in the Government school at Sandoway and the lay school at Gwa, which are exclusively for girls

umber schools d pils.

Including the two Government Vernacular Schools there were in 1910, 8 schools with 572 pupils graded as Middle Schools, 35 with 1,236 pupils graded as Upper Primary, and 17 with 477 pupils graded as Lower Primary. This gives a total of 60 schools with 2,285 pupils which teach the Government courses. In addition there were 90 private schools with 1,325 pupils which may be graded as elementary schools. Finally there are 2 Anglo-Vernacular schools with 242 pupils. Thus the total number of schools was 152, and the total number of pupils was 3,852. There are no High Schools in the district.

Besides the schools already mentioned by name, the best known schools in each township are Maung Mya Thi's

at Sandoway, Ma Eing Tha Pyu's at Taungup, and Maung Po Thein's at Gwa.

Admi- tratio

The Arakan Division belongs to the education circle which is in charge of the Inspector of Schools who has his headquarters at Bassein; lately it has been proposed to make Arakan into a separate circle. Sandoway district with Kyaukpyu, used to be a sub-circle under a Deputy Inspector of Schools who was stationed at Kyaukpyu, but in 1903 the district was formed into a separate sub-circle and a Deputy Inspector of Schools was posted to Sandoway.

CHAPTER XIII.

PUBLIC HEALTH.

General health—Chief diseases: Malaria; Bowel complaints; Ophthalmia.—Imported diseases: Small-pox; Cholera—Hospitals: Sandoway; Taungup; Gwa—Vaccination.

Gene healt

Taken all round the district cannot be called a very unhealthy one, at least so far as the native population is concerned; for the mean ratio of deaths per 1,000 during the past 5 years is 24·81, as compared with 26·94 for all Lower Burma. Its headquarters town has always borne the reputation of being very healthy, and is by far the healthiest town in Arakan. The ratio of deaths for the above mentioned period is 19 19, as compared with 24·04 for the town of Kyaukpyu, 25·40 for Akyab, and 41·13 for all towns in Lower Burma.

The ratios for both town and district would be very much lower if it were n t for the havoc caused by malarial fever. Plague is quite unknown, small-pox and cholera are rare visitations. During the past 5 years the mean ratio of deaths from small-pox was ·07, as compared with ·81 for Kyaukpyu, ·35 for Akyab, and ·10 for all Lower Burma; similar figures for cholera are ·85, 1·7, 1·26 and 1·09 respectively. The unhealthiest time of the year is August to October, and the healthiest months are March and April. Nearly half the deaths recorded are those of children under 5 years of age and this proportion is higher than the mean for the province.

Chie disea Mala

The district has the reputation of being one of the worst malarial tracts of Lower Burma; it is worse than Kyaukpyu and is almost as bad as Akyab. The mean ratios of deaths from this disease are 1·84 in Sandoway, 10·18 in Kyaukpyu, 13·52 in Akyab and 9·62 for all Lower Burma. The least malarial part of the district is the sandy island of Padin.

wel n- ints.

Next to malaria but a long way behind it, bowel complaints claim the greatest number of victims, the ratio of deaths however is slightly below the mean for Burma. The form of complaint which is most widespread, though it does not generally cause death, is worms. More persons come to be treated for this complaint than even for malaria.

hthal- a.

Cases of ophthalmia are very common, even more so than in Kyaukpyu and Akyab. The unsightly fetid pools formed under most houses where the washing up is done, is the main cause of this disease. Often grave mischief results because villagers do not think it worth-while to travel to a dispensary for treatment.

ported eases: all- .

It has been pointed out that small-pox and cholera are not endemic. They are imported by inhabitants who go on trading expeditions to neighbouring districts. During the past 20 years there have been 9 years in which cases of small-pox have occurred; fortunately the disease never gets a hold, the highest recorded death rate per 1,000 was 1·15 in 1893. The worst visitation known was in the cold weather of 1861.

olera.

Cholera is introduced more frequently than small-pox, and when well established sweeps along until it dies out at the coast line. Three severe epidemics are recorded. The first in 1853 and 1854 when it was brought in by coolies from Prome, at the time of the construction of the Prome road. The second was in 1870 when it came into the district from the An township of Kyaukpyu, and the third was in 1876 and 1877. On this occasion cholera visited Sandoway from Kyaukpyu in August 1876, and after dying out came in again in the following August when it was again brought in from Kyaukpyu. Since then there have been milder visitations every few years, the last was in the early rains of 1908.

pi-

Although a Civil Surgeon was posted to the district in 1828, and a civil dispensary was opened at Sandoway in 1830, the only hospitals in the district until 1852 were the departmental ones in the jail and in cantonments. In the latter year a mat and thatch building was put up in Sandoway which has developed into the Municipal hospital consisting of brick and plank buildings. A dispensary was opened at Taungup in 1882 but had to be closed in 1887 for want of funds, in 1897 a hospital was built with money raised by public subscriptions and remained in use until 1910, when it was closed because the District Cess Funds were too poor to maintain it. Efforts are being made to re-start this hospital as it was a great boon to the country-side and was

always well attended. In January 1909 a hospital was built from District Cess Funds at Gwa and is being maintained.

The Sandoway hospital took a long time to gain the confidence of the public, especially in regard to in-patients. In 1872 or 20 years after it had been opened, only 63 in-patients or an average of 2 a day, and 124 out-patients attended it. Ten years later the number of in-patients had risen to 93 only, but the number of out-patients had increased to 3,444. Again ten years later in 1892, the number of in-patients was only 126 or an average of 3 a day, but the number of out-patients had more than doubled and was 7,819 or an average of 43 a day. It was not until 1907 that the number of in-patients began at all to approach the number for whom accommodation was provided. In 1910 a new hospital was erected at a cost of about Rs. 18,000; it includes a ward on the pavilion plan containing 12 beds for males and 4 for females. The daily average attendance at present is 10 in-patients and 70 out-patients. The hospital is maintained chiefly from Municipal Funds and costs about Rs. 5,000 a year, towards which Provincial Funds contribute Rs. 1,000 and District Cess Funds Rs. 900. For some years past a Dufferin nurse has been on the hospital staff. San-doway.

When the hospital at Taungup was in existence it had room for 8 males and 2 females, but the building was on the plan of an ordinary Burman house and was lately condemned as being insanitary. In the year before it was closed there was an average daily attendance of 3 in-patients and 24 out-patients. The hospital cost about Rs. 2,000 a year to maintain, of which Government contributed Rs. 840 and District Cess Funds the rest. Late in 1911 a dispensary was opened for which Government provides a Sub-Assistant Surgen and District Cess Funds the amount required to meet incidental charges. Taung-up.

Gwa hospital cost nearly Rs. 16,000. There is accommodation for 6 males and 2 females, and the dispensary is in a separate building. In the year in which it was opened there was a daily average of one in-patient and 20 out-patients, in the following year 1910, the numbers were 2 and 23 respectively. It is maintained by District Cess Fund at a cost of about Rs. 2,400 a year, lately Government has agreed to give Rs. 840 a year towards the upkeep of this hospital. Gwa.

In 1837 the Civil Surgeon reported that vaccination was fully established and that 1,400 persons had been operated on. But in 1844 and again in 1855 the Civil Surgeons Vacci-tion.

complained that people were reluctant to have their children vaccinated. At present vaccination is compulsory in Sandoway town but not in the rest of the district. Inoculation is not practised. Latterly the average number vaccinated yearly has been about 2,000; the staff consists of a Superintendent, a vaccinator for each township and one for Sandoway Town. The annual cost is about Rs. 2,000.

CHAPTER XIV.

MINOR ARTICLES.

District Headquarters—Sandoway Township: Singaung; Shwegyaungbyin; Natmaw—Taungup Township: Taungup; Ngamaukchaung—Gwa Township. Gwa.

District Headquarters.

Sandoway Town situated almost in the middle of the extreme length of the district in 18° 28′ N and 94° 21′ E, is on the left bank of the river of the same name at a distance of 16 miles from its mouth, but is only 4½ miles from the sea in a direct line due west. It stands in a nearly circular basin, well cultivated with paddy and surrounded by hills 200 to 500 feet in height, which on the north and south close in on the town. The native portion which is about a mile in length lies between the Nandaw pagoda hill in the north and the Sandaw pagoda hill in the south; on the east flows the river, and on the west at an extreme breadth of half a mile, the boundary is the Zi stream and then the Nan stream which empties into the river at the foot of Nandaw hill. Being confined within these limits there is little room for expansion, and in consequence the houses are somewhat crowded together and the value of land is very high. The Civil Station occupied by the residences of European officials is on a low, wooded, horse-shoe shaped hill which faces west and is to the south of the native town.

The origin of the name, the early history of the town, and of its occupation by the British, and of its having once been overrun by insurgents have been described in Chapter II. The difficulty of access to it has been remarked on under the head Rivers in Chapter I and in Chapter VII dealing with means of communication. And its reputation for general healthiness has been noticed in the last preceding chapter.

After the annexation Sandoway became a place of less note than before, and its population dwindled in proportion as the recently established town and port of Kyaukpyu came

to the front. In 1826 the population was 4,500, in 1834 it was 2,000 and in 1868 it was only 1,500. Since then it has increased but the growth has not been rapid, Sandoway being neither an industrial centre nor an outlet for the produce of the district. In 1878 the population was 1,617, in 1885 when it was constituted a Municipality the population was 2,069, in 1901 it was 2,845, and in 1911 there were 3,360 inhabitants living in 621 houses. Contrary to what is found in the rest of the district the number of Burman Buddhists is about the same as that of all other beliefs, and of the latter the vast majority are those Mahomedan Burmans known as *Myedus*.

The town is well laid out with good roads crossing each other at right angles, and these conditions date from Burmese times, for in 1828 the Commissioner noticed the neat appearance of the town and the good state of the roads. There are very few pukka buildings, but the better class of plank houses are numerous, more so than in Kyaukpyu. There are few *pôngyi kyaungs*, mosques or temples, and these are of no architectural pretensions. Besides the usual public offices which were put up in 1892 after the old Court-house had been burnt down by insurgents, there is a small jail, a combined post and telegraph office, and a circuit house. There are two Anglo-Vernacular schools both teaching up to the Seventh Standard and there is a good vernacular school for boys and another for girls.

The town is divided into six wards and its affairs are managed by a Municipality which keeps the streets repaired and lighted, carries on conservancy work and maintains a good bazaar, a hospital and dispensary, a slaughter house, a bakery and two public ferries on the Sandoway river.

Sandoway Township.

The Sandoway township occupies the central portion of the district and lies between 18° 2′ and 18° 40′ N, and 94° 13′ and 94° 52′ E. The area is 1,318 square miles.

Starting from the Bay of Bengal the northern boundary is the Hôn stream to its source in the Kwet-taung spur. After that it runs along the crest of this spur and the crest lines of the Yegauk, the Nebu, and the Shaukpin spurs, the first being an offshoot of the second, and the second being an offshoot of the third. The last named branches off from the Yoma at Taungbôngyi peak, which is just south of where the Prome road crosses the range. On the east the boundary is the crest of the Yoma as far as the Kywezin pass which is a footpath leading into the Henzada district. The southern boundary leaving the Yoma at this point

follows the crest of the Taungbyaung spur and then the crest of its offshoot the Chauk-kunit spur down to the source of the Sibin stream. Thence the boundary is this stream to its junction with the Migyaungyè river and then this river to its outlet in the Bay of Bengal. On the east the township abuts on the Kyangin, Kanaung and Ingabu townships of Henzada; to the north of it lies the Taungup township and to the south the Gwa township.

The township is full of streams and near the coast northwards from Sandoway they are all joined together by a net work of tidal creeks. It contains more plain land than Gwa, but not such extensive stretches as are to be seen in Taungup; the proportion of cultivated land however is greater than in the latter township. The cultivated area has increased from 14,612 acres in 1876, to 34,026 in 1911; of the latter area 29,050 acres were under paddy, 1,097 under tobacco, and 1,063 under *dani*. In the same year the land revenue proper was Rs. 58,432, Capitation tax was Rs. 33,436, and the total collections under the accounts heads of Land Revenue was Rs. 94,732. Next to agriculture the most flourishing business is the timber trade which is carried on in the southern half of the township.

Including the town of Sandoway the population has grown from 34,090 in 1891 to 43,215 in 1911; and in the same period the density has risen from 25 to 33 persons per square mile. The township has a larger proportion of Burmans than Taungup, but not so large as Gwa. It contains fewer Chins than Taungup and just a few more than Gwa. Practically all the Burman Mahomedans of the district live in this township. In 1911 there were 282 villages containing on the average 29 houses each. Those of over 1,000 inhabitants are Singaung, Shwegyaungbyin and Natmaw.

Sin-gaung. Singaung is named from a hill near the village which is shaped like an elephant's head, it is at the mouth of the Sandoway river on its right bank. The population was 706 in 1877; 1,006 in 1901, and 1,565 in 1911; it is the third largest village in the district. The roadstead for seagoing steamers lies about four miles off in the offing and Singaung where there is a good landing stage forms a convenient waiting place for those about to travel by them. There is a Public Works Department bungalow here which can be used by travellers. The soil in the vicinity is very poor, the only crop that does well is groundnuts; but the village is a great fishing centre, and it is also used as a place of call and refitting for inward and outward bound trading

boats. It is a compact, well laid out village with broad roads crossing each other at right angles.

Shwegyaungbyin is a long straggling village one mile north of Sandoway along the Kinmaw road. It is named after a golden *kyaung* which was built here by a king of Arakan for his *pôngyi* teacher. The population was 1,160 in 1911 and consists mostly of the overflow from Sandoway town. It is the residence of one of the two *taikthugyis* remaining in the district. Shwegaungbyin.

Natmaw, called *Atet* or upper, to distinguish it from another village of the same name a few miles lower down, used to be on the left bank of the main Thade river at a distance of 1½ miles below Shwehle Police Station, but now the river has shifted to a channel about a mile away. Its population in 1911 was 1,041. It is the centre of a large paddy producing tract and of sessamum producing *kaing* lands. It used to be the residence of the *taikthugyi* of the Thade circle and is now the headquarters of a Revenue Surveyor. Natm

The Taungup township is the most northerly one of the district and is also the largest, it lies between 18° 46′ and 19° 32′ N, and 94° and 94° 44′ E. The area is 1,663 square miles. The boundaries have been described for the northern, eastern and western are the same as those of the district, and the southern is the northern boundary of Sandoway township. On the north Taungup abuts on the An township of Kyaukpyu; on the east on the Mindôn and Kama townships of Thayetmyo, and the Padaung township of Prome; on the west, separated by the Kaleindaung river, lies the island of Ramree in Kyaukpyu district. Taun Town ship.

By far the greater portion of the township consists of uninhabited forest clad hills filling up the spaces between the four chief rivers the Mai, Lamu, Tanlwè and Taungup. But at an average of about eight miles from the coast the valleys of these rivers widen out into stretches of fertile paddy land, and lower down the valleys sink into mangrove swamps interlaced by intercommunicating creeks. Barely one-thirtieth of the whole area is cultivable and owing to the nature of the country the rate of expansion of cultivation is slower than in Sandoway township. In 1876 the cultivated area was 15,038 acres or a little more than in Sandoway, but in 1911 it was 28,771 or about 5,000 acres less than in Sandoway. Of the latter area 24,497 acres were under paddy, and 1,828 under *dani*; the chief crops obtained from *kaing* lands are chillies and hemp. Other occupations are country

boat building carried out in the south-west corner of the township, and the extracting of timber chiefly *pyanan* and *kabaing* from the mangrove swamps which abound in this township. The land revenue collected in 1911 amounted to Rs. 51,502, the capitation tax to Rs. 29,707 and the total collections under the accounts head of Land Revenue came to Rs. 81,980.

The population has increased from 29,088 in 1891 to 37,625 in 1911, and the density from 18 to 23 persons a square mile which is at a slower rate than either Sandoway or Gwa. There are 286 villages containing 7,434 houses or an average of 26 houses each. The only villages containing more than 1,000 inhabitants are Taungup and Ngamaukchaung.

'aung-p.

Taungup, the headquarters of the township is on the left bank of the river of the same name at a distance of about 10 miles from its southern mouth at Khaunglaungdu rock. Owing to shoals launches cannot go up to the town but only as far as Wetcheit which is two miles from it by road. The name means crooked hill and is the peak in the Yoma where the river has its source. It is well laid out with broad roads crossing at right angles. The population in 1877 was 1,551, in 1901 it was 1,707, and in 1911 it was 1,875 ; it is the second largest village in the district. Taungup is the starting point of the cart-road over the Yoma to Padaung and Prome and is an important observation station on the main telegraph land line from Burma to India, it will also be an important station on the projected railway.

Besides the Court house built in 1895 the other public buildings are a Police-station, Military Police barracks, Telegraph Office, Post Office and Public Works Department bungalow. There is also a small dispensary, a small bazaar which yields a revenue of about Rs. 600 a year, a good vernacular boys' school maintained by Government and a flourishing lay girls' school.

gamauk-aung.

Ngamaukchaung almost in the centre of Padin island can be reached by boats only on the top of high water. It is one of the centres of the country boat building industry and of salt manufacture, but it is decreasing in size as those industries are decaying. The population in 1877 was 1,396 and in 1911 it was 1,060. Owing to encroachments by the sea the paddy lands have greatly deteriorated and pasturage is so scarce that the cattle are the poorest looking in the district.

a vn-.

The Gwa township is the most southerly one of the district and is also the smallest, it is situated between 17°

15′ and 18° 10′ N., and 94° 25′ and 94° 49′ E. The area is 803 square miles. The eastern, southern and western boundaries are the same as those of the district and its northern boundary has been described as the southern boundary of Sandoway township. It abuts on Thabaung township of Bassein on the east and south.

The township is a long narrow strip tapering to the south, and lies between the Yoma and the Bay of Bengal. The whole surface is extremely mountainous and wooded, and this character is maintained right down to the sea where the forest-clad hills end as a long stretch of rock bound coast. The cultivable areas, which are the poorest in the district, are found on the banks of the rivers just behind the coast line; besides the soil being so poor the cultivable lands are of small extent, and in consequence the inhabitants have to depend largely on other occupations, the chief of which are fishing, boat building and cattle breeding. The area under cultivation was only 13,103 acres in 1902, and in 1911 it had increased to only 16,298; of which 14,309 were under paddy, the other crops raised being scattered over small areas. Owing to the sparseness of cultivation the poverty of the soil, and the difficulties of communication, the township is subject to seasons of scarcity. The revenue paid by lands in 1911 was Rs. 22,558, by Capitation tax Rs. 18,276, and by all heads comprised under the accounts head of Land Revenue was Rs. 42,067.

The township was formed in 1872, a few years after the tract of country lying between the Kyeintali and Gwa rivers had been restored by Bassein. At that time the headquarters were at Kyeintali but they were removed to Gwa in 1874. The population has increased from 15,331 in 1891 to 21,963 in 1911, or by 43 per cent. as compared with an increase of 27 per cent. in Sandoway and 29 per cent. in Taungup during the same period. The density per square mile has risen from 19 to 27. The vast majority of the population is Burmese, there being fewer Arakanese and Chins than in the rest of the district. In 1911 there were 223 villages containing 4,411 houses or an average of about 20 houses each. The only village containing more than 1,000 inhabitants is Gwa.

Gwa. Gwa, the headquarters of the township lies at the mouth of the river of the same name. It is connected with Sandoway by a cart road 79½ miles in length, and from November to April launches run by sea weekly between the two places. It carries on a large trade with Bassein in the cold weather by means of cargo boats of English design

which sail round Cape Negrais. The village is buried in groves of fruit trees, and is well laid out with roads crossing at right angles, but many of these have been damaged by the overflowing of tidal creeks which run up into the village. The population in 1877 was 1,029, and in 1911 it was 1,242, composed almost entirely of Burmans. In addition to the Court house built in 1896, there are a Police-station of the defensible type, Military Police barracks, a branch Post Office and a good hospital. There is also a district rest house and a landing stage for launches has lately been built. In the village there are two good vernacular lay schools, one for boys and the other for girls.

List of Officers who have held charge of Sandoway District.

No.	Names of Officers.	Years.	
1	Captain Gordon (killed by insurgents in February 1829).	March	1827
2	Captain Bellew (officer commanding troops officiated).		
3	Captain White	August	1829
4	Lieutenant Bogle ...	October	1829
5	Captain White		1830
6	Captain Rainey ...		1835
7	Doctor Morton (Civil Surgeon).		1838
8	Captain Phayre ...		1842
9	Lieutenant Fytche (reverted after a few months because he did not know Burmese).		1845
10	Lieutenant Fytche ...	November	1846
11	Lieutenant Ripley ...		1852
12	Doctor Davis (Civil Surgeon)		1854
13	Lieutenant Ripley ...		1855-56
14	Mr. Beddy		1864
15	Captain Plant		1865
16	Captain Pemberton ...		1867
17	Mr. Macrae	January	1869
18	Mr. Treacy	August	1869
19	Captain Fryer		1873
20	Mr. Duke	February	1875
21	Mr. Gower	July	1875
22	Captain Spearman ..	December	1875
23	Mr. Hildebrand ...		1877
24	Captain Poole		1879
25	Captain Cresswell ...		1881
26	Mr. Birks*		1883
27	Mr. A. T. A. Shaw* ...	May	1886
28	Mr. Batten	July	1886
29	Mr. Courneuve	October 1887 to August	1888
30	Mr. Fleming*	January	1889
31	Mr. Houghton*	September	1889
32	Captain Warde ...	June	1893
33	Mr. Mackay*	November	1893
34	Mr. Stevenson		1895
35	Mr. E. A. Moore* ...		1897
36	Mr. Metcalfe	March	1898
37	Captain Obbard ...	August	1898
38	Major Pritchard ...		1900
39	Mr. Dawson*		1902
40	Mr. McKerron*... ...		1904
41	Mr. Minns*		1905
42	Mr. Tydd		1908
43	Mr. Minns*		1912

*Members of the Indian Civil Service.

BIBLIOGRAPHY.

British Burma Gazetteer, 2 Volumes.

Imperial Gazetteer, Provincial Series, Burma, Volume I.

Catalogue of Archæological Collections, Imperial, Part II, Pages 163 to 165.

Reprint of Geological Papers on Burma, 1882, Page 39, *et seq.*

Settlement Report, 1897-98.

Settlement Report, 1905-06.

Bound Volumes of Correspondence, 1826—1865.

INDEX.

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

R

S

T

G. B. C. P. O.—No. 7, Dt. Gaz., 2-9-1912—370—B. P.